

# BT's Sustainability Report 2007

Environment



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**better**  
world

# Environment

Telecommunications is perceived as an environmentally sound technology and it is certainly cleaner than traditional industries. But we use a lot of energy to operate our networks and we consume natural resources indirectly through, for example, the services and equipment we buy.

We believe that we have a duty to manage our environmental affairs so that we minimise the drawbacks and maximise the benefits.

We discuss these issues here, providing data on our performance.

## Environmental Management System

### ISO 14001 certification

Good environmental management saves money and improves business efficiency. BT's environmental management system (EMS) complies with ISO 14001:2004, an international standard for the certification of environmental management systems.

The standard helps keep us focused on reducing our environmental impacts.

In the 2007 financial year:

- We successfully maintained our ISO 14001 UK certificate
- BT Spain's ISO 14001 certificate was renewed following a successful reassessment
- BT Belgium almost completed work on their EMS. Their ISO 14001 assessment is due in the first quarter of the 2008 financial year.

During the 2008 financial year we also plan to implement EMS in the USA, Australia and Hong Kong.

### System improvement

Demonstrating that environmental impacts are adequately managed is a key requirement of any EMS. Many aspects of BT's environmental management have been embedded at an operational level, and are considered 'business as usual'.

Since 1999, our EMS has worked well without the need for change. More recently, we have found the need to make some processes, and the areas and people responsible for them, more visible.

We have purchased a complete, web-based environmental information system, called enviroMANAGER™. The system includes modules for managing risk, audits, incidents, and data collection and for developing and monitoring targets. We have been using the legal module, enviroLAW™, for two years.

The new system will help us take a risk-based approach to environmental management, ensuring clear accountability for those responsible for managing risks on a day-to-day basis. This marks a fundamental change in our approach.

### Environmental impacts

Click on the links to view each risk area:

- [Fuel, energy and water](#)
- [Waste](#)
- [Transport](#)
- [Emissions to air](#)
- [Procurement and the environment](#)
- [Product stewardship](#)
- [Local environmental impacts](#)
- [Environmental benefits](#)

# Environmental Policy

Our Environmental policy establishes our targets in sustainable environmental improvement and compels us to measure and monitor our performance regularly.

We communicate the Group's environmental objectives, action plans and achievements because we want to help every BT person understand and implement the policy in their daily work.

## Policy

BT recognises that in its day-to-day operations it impacts on the environment in a number of ways and we are committed to minimising the potentially harmful effects of such activity wherever and whenever possible.

This policy statement provides the framework on which our environmental programme is based. This enables us to set targets and measure progress as well as strive for continuous environmental improvement.

BT seeks to maximise opportunities for the provision of services and solutions which can help to reduce environmental impacts, and which may provide significant environmental benefits.

We have undertaken to help every person who works for and on behalf of BT understand and implement the relevant aspects of this policy in their day-to-day work through the regular communication of objectives, action plans and achievements.

We will also ensure that BT's joint ventures and other partners are aware of this policy and promote the principles of sound environmental practice.

The Chief Executive of BT, Ben Verwaayen, has ultimate responsibility for the company's environmental policy and performance. The Company's Corporate Social Responsibility Steering Group (CSRSG) oversees the implementation of all social and environmental programmes across the BT Group. The CSRSG meets quarterly and regularly reports to the Board. It is chaired by BT's overall CSR champion Meryl Bushell, Chief Procurement Officer. BT's Environment Champion - with personal responsibility for environmental policy development, implementation and co-ordination – is Bruce Stanford, a member of the CSRSG.

## Our commitment

BT is committed to the prevention of pollution and minimising the impact on the environment of its operations globally. In particular, we will contribute to initiatives that seek to address climate change. Through a programme of continuous improvement BT and its wholly owned subsidiaries will:

- Meet all applicable legislative and other requirements, and where appropriate exceed or supplement these by setting our own exacting standards,
- Seek to reduce consumption of materials in our operations, reuse rather than dispose whenever possible, and promote recycling and the use of recycled materials,
- Design energy efficiency into new services, buildings and equipment and manage energy wisely in all operations,
- Reduce wherever practicable the level of harmful emissions,
- Develop products that are safe to use, make efficient use of resources, and which can be reused, recycled or disposed of safely,
- Work in partnership with our suppliers to minimise the impact of their operations on the environment,
- Seek to minimise the visual, noise and other impacts on the local environment when siting and maintaining our buildings, structures and equipment,
- Work with external groups and organisations to promote the concepts and practices of environmental protection,
- Include environmental issues in discussions with the BT unions, the BT training programmes and encourage the implementation by all BT people of sound environmental practices both at home and at work,
- Monitor progress and publish details of our environmental performance in our Social and Environmental report, as a minimum, on an annual basis.

The Company's environmental management system will monitor delivery of these commitments.

## Environmental prosecutions

BT recognises that it has clear legal obligations for the management of its environmental programmes.

During the 2007 financial year, there were no environmental prosecutions in the UK.

# Fuel, energy and water

As one of the UK's biggest commercial energy users we are conscious of the need to contribute to national and international initiatives to combat climate change.

One of the main causes of climate change is the increased concentration of man-made gases in the atmosphere, known as greenhouse gases (GHGs). By far the most significant is carbon dioxide (CO<sub>2</sub>); produced when fossil fuels are burned to make electricity, heat buildings and water and power vehicles.

Here we describe how we manage our fuel, energy and water use.

- [Energy consumption](#)
- [Energy efficiency](#)
- [Renewable energy](#)
- [Fuel Storage](#)
- [Water use](#)

## Energy consumption

We continuously monitor our energy consumption. Using one of the UK's largest computer-based monitoring and targeting systems, we collect data at half-hour intervals from more than 6,000 sites. This has helped us identify wasted energy earlier than relying on a monthly bill.

Energy consumption for BT's network and estate during the 2007 financial year was 2,619 GWh. This is made up of:

- 1,992 GWh electricity (approximately) to run our networks
- 212 GWh electricity (approximately) used at our office premises
- 415 GWh (gas and oil use) as heating fuel at all our sites.

### Trends in energy use

Our investment in energy management has helped us to keep our energy consumption relatively unchanged.

We are working hard to improve forecasting of our energy needs and to further improve the energy efficiency of our network equipment.

With no major changes expected in the size of our estate, we are focusing on continuing to reduce our use of heating fuel (gas and oil). We measure our consumption and make annual comparisons of usage after weather conditions are taken into account (using degree days – see [Environment glossary](#)). We continue to convert oil-fired heating systems to run on gas and as a result our oil consumption continues to decrease.

### Process energy

Process energy includes all the electricity needed to power more than 6,000 transmission stations, satellite earth stations and telephone exchanges that support our voice, data and internet networks.

We generate additional electricity on site using our own generators. This is done to provide extra electricity at peak times and during supply failures. In the 2007 financial year, we generated 4.37 GWh of electricity reflecting the decrease in number of calls for the TRIAD regime (see [Environment glossary](#)).

We will need more energy to power our fast-expanding networks. We want to minimise the increase and we are working hard to improve our network growth forecasting and to assess accurately the impact of broadband on energy demand.

BT is in the process of transforming its telecommunications and data network with its radical twenty-first century network programme.

Energy use has been a key element in the specification of the equipment. The network is under construction and we have set a target to reduce energy demand (line-for-line) by around a third, compared with the existing network.

Fresh-air cooling (as opposed to air conditioning) is being used as the primary system to cool all new network equipment. This saves energy and avoids the need to use refrigerant gases, some of which are powerful global warming gases.

### Premises energy

Premises energy includes all the electricity, oil and gas required for more than 1,000 offices, warehouses and depots used by BT.

As we rationalise and refurbish our premises, our overall energy use is decreasing. Although air conditioning increases energy consumption per square metre, our rationalisation and refurbishment programme enables us to use our office buildings more efficiently (more people, less empty space). This helps us reduce energy use per person.

In the 2007 financial year, the amount of energy we used for heating reduced. However, weather corrected heating efficiency, decreased by 4% and consequently, we have failed our 2% target. Typically heating plant works more efficiently in colder weather and this winter was the warmest in 10 years. Average degree-days (see [Environment glossary](#)) for the year were approximately 17% lower than in the previous year.

## Energy efficiency

We treat energy management as part of everyday business. This applies to our partners too, such as those companies that manage our properties and facilities.

In the 2007 financial year, BT Wholesale's investment in its energy management programme resulted in savings of 14 GWh.

Our energy management programme also helps us maintain our:

- Energy efficiency accreditation (with the UK National Energy Foundation & Energy Institute)
- ISO 14001 certification.

We have a range of initiatives to reduce our energy consumption, including:

### Energy benchmarking and surveys

Our contracted facilities management team continues to conduct surveys at poorly-performing sites, to minimise energy and water consumption. Web-based electricity reports, updated every half-hour, have helped us find areas where we can cut waste and save energy. This has been supported by energy surveys within our network buildings, and surveys carried out by specialist consultants.

### Plant efficiency

We look at the whole life of our plant when we assess its cost, including its energy efficiency. Buying more efficient equipment helps save energy and can reduce demand for cooling, cutting the cost of the plant over its whole life. Further cost savings can be made by replacing refrigerant-based cooling (air conditioning) with automated fresh-air cooling systems (which also reduce the use of refrigerant gases, such as HCFCs and HFCs). Building management systems that integrate heating and cooling, further eliminating waste are now installed as standard.

## Renewable energy

BT renewed its electricity supply contract in the 2007 financial year, which provides nearly all of our UK electricity from renewable sources and combined heat and power (CHP) plants. When the initial contract was placed, it made us the UK's largest purchaser of green electricity.

In the 2007 financial year, our use of renewable energy cut our carbon dioxide emissions by approximately 627,000 tonnes.

We continued to work with the Carbon Trust to find ways to integrate renewable energy generation into new building projects and refurbishments of our existing buildings.

### Wind turbines and solar

The Goonhilly visitors centre (80,000 visitors annually) has a new attraction. This is a nine metre high, six kilowatt wind turbine alongside the building and 66 square metres of solar electricity cells on the roof. This is our first mainland site in the UK to use this hybrid wind and solar system. The system's output is being monitored and we are evaluating the possibilities for doing trials at other sites.

## Fuel Storage

Testing, repair and decommissioning of fuel tanks are a vital part of our programme to reduce the risk of pollution from fuel storage.

We continue our regular inspection and testing programme of our fuel storage tanks. During the 2007 financial year, 247 buried tanks were decommissioned and replaced with 225 new double-skinned internal tanks, which meet strict environmental standards.

### Incident reporting

Even with good controls spills happen. To reduce the number and severity of these incidents, it is important that they are investigated promptly, lessons are learned and any changes are made quickly. BT classifies environmental incidents as:

- Serious – where the spill has entered, or is likely to enter, either the drainage system or topsoil
- Significant – where the spill covers a wide area but is confined to a hard standing area only and there is no evidence of entry into the drainage system or topsoil
- Minor – where a minor spill is contained within a very small area.

For significant and serious incidents, a specialist contractor cleans up. For serious incidents in the UK, the Environment Agency (EA) or the Scottish Environment Protection Agency (SEPA) are also informed.

### **Investigation process**

In the 2007 financial year, a total of 13 oil-related incidents were reported. However, after extensive site investigations three of these incidents were discounted, as no product was found in the subsoil. The final number of incidents in the 2007 financial year was 10, the same as 2006.

Five of the incidents were classified serious, and one of these is still under investigation. One was classified as significant and four as minor. As a result of our investigations, remedial works have begun and recommendations for improvement adopted to avoid recurrence.

The known quantity of oil discharged to land or drainage systems (serious incidents) was 1,190 litres. Investigations continue at one site where there was a maximum possible discharge of 9,676 litres.

## **Water use**

We use water mainly for catering, washing and toilets. All our sites have water meters.

A concerted effort to reduce our water consumption (leak detection, underground pipe replacement and water-saving devices) has led to a reduction in consumption of 8% (from 1.89 million cubic metres in the 2006 financial year to 1.74 million cubic metres in the 2007 financial year).

The 2007 financial year was our sixth consecutive year of water efficiency improvement. Our focus is now on maintaining our efficiency, as there is little more we can do to save water. But we do continue to try. For example, we have trialled waterless urinals, and plan further trials in 2007/08.

## **Waste**

We are tenants in much of our property and our building facilities are managed by a contractor. We work in partnership with them to ensure effective waste management.

We try hard to avoid making waste. But when we do, we attempt to reuse or recycle it. As a last resort it is sent to landfill.

In this section we describe:

- [Waste management](#)
- [Materials recycling](#)

## **Materials recycling**

Much of our general waste is disposed of through material recovery facilities (MRFs). These are huge depots where recyclable materials like paper, cans, cardboard, plastic and paper cups are separated from general waste and sent for reprocessing. Only the remainder is sent to landfill.

We began to send our waste to MRFs in 2001/02 as part of the waste contracts managed on our behalf by Monteray, our facilities contractor.

We use a wide variety of recycling initiatives. This is not only good environmental practice, but also financially worthwhile as it reduces landfill costs and, in many cases, we are paid for the materials collected.

All our major sites have dedicated paper recycling facilities. Office paper is collected in blue boxes.

In the 2007 financial year, we recycled 40,007 tonnes of waste, which represents 42% of our total waste. This is the same as 2006 but a better overall result, as our total waste generated decreased by 7,073 tonnes during the year.

Full details of the products, materials and quantities we recycle can be found in our Waste Recovery Model.

Our model provides:

- Details of waste recovered by product
- The last five years of data
- Trends over the last five years
- Data on income and expenditure of recycling schemes.

## **Waste management**

The production and correct disposal of waste from our operations are key environmental issues for BT. We must have effective waste management systems to maintain our ISO 14001 certification.

We have three categories of waste:

- Category 1 – does not present a danger of environmental pollution, such as paper

- Category 2 – not toxic or hazardous in unmodified form, but which has the potential to become so if not treated properly on disposal, such as cable
- Category 3 – inherently toxic or hazardous and requires the most careful handling at all stages of the disposal process, such as diesel oil.

In the 2007 financial year, we produced 94,928 tonnes of waste. Of this, 54,921 tonnes went to landfill, 8% less than in 2006.

One 'owner' is responsible for coordinating all BT's waste management processes, to ensure a uniformly high standard of waste management throughout the company. This overall owner chairs a waste forum, comprising all those directly responsible for our different waste streams, to ensure effective management. The forum's role is to:

- Consider any new ideas on waste management
- Set and monitor waste targets
- Review contractors' environmental performance
- Ensure we comply with all waste legislation
- Manage our packaging obligations
- Promote and communicate environmental initiatives and awareness.

During the 2007 financial year, we completed a review of responsibility for all waste streams in BT divisions that generate and dispose of waste.

The study reviewed who in BT is responsible for our response to consultations on new waste-related legislation and for our consolidated responses to consultative bodies. As a result, we re-issued our company-wide waste products procedure and produced a waste stream matrix which specifies ownership.

## Transport

We run a fleet of 32,083 commercial vehicles and 9,622 company cars, managed under contract by our subsidiary, BT Fleet.

We use our considerable purchasing power to ensure we achieve the best possible value for money and lowest costs for the full life of our vehicles.

Additionally, we review vehicle replacement cycles, which ensure the fleet benefits from latest technologies and emission standards, while providing greater reliability and lower maintenance frequency and costs.

During the 2007 financial year, the commercial vehicle fleet decreased by 433 and the company car fleet reduced by 856.

Our company car policy supports the key objectives of the UK Government's emissions-based company car taxation initiative:

- Increased allowance to employees who opt out of company car ownership
- Improved tax efficiencies for employees who opt for lower-emission cars
- Advice to company car drivers, encouraging users to choose lower-emission cars.

### Initiatives undertaken in 2007 financial year

- Amended our Commercial Vehicle Drivers' Handbook to focus on routine vehicle checks
- Briefed drivers on carrying out the vehicle checks
- Required drivers to sign to confirm they understand the Handbook
- Asked managers to confirm that drivers know about and are competent to carry out the checks
- Issued managers with tyre pressure gauges for spot compliance checks
- Appended a Tyre Care Guide to the Handbook
- Fitted labels in vehicle cabs to remind drivers about the checks
- Completed a critical vehicle audit, removing from service 344 redundant vehicles
- Prepared an internal paper on the status of bio-fuels for transport in the UK and the EU, and BT Fleet's current position on the use of bio-diesel in its vehicles.

### Plans for 2008 financial year

- Train 50 engineers in fuel efficiency to assess fuel savings and determine our approach to future training

- New vehicles ordered during the 2008 financial year will be limited to 70mph, where this is offered by the manufacturer
- All vehicles limited to 70mph will be labelled with a 'green' message
- BT Supply Chain's vehicle fleet is consolidating deliveries to BT sites so that each site will only be visited once a week instead of up to 5 times in a week and it is expected to reduce their fleet by 50 vehicles as a result.

Progress on these initiatives will be monitored by BT's Commercial Vehicle Forum.

## Emissions to air

Other than carbon dioxide from energy generation, our main emissions to air are refrigerant gases that escape accidentally from air conditioning equipment.

Some emissions are ozone-depleting and others contribute to climate change. We monitor all emissions closely and report on our climate change emissions in accordance with the requirements of the GHG Protocol.

Wherever possible, we use fresh air to cool our telecommunications equipment, including our new network. Where fresh air alone is not adequate, we use a combination of fresh air and refrigeration, only using the refrigeration element on warm days. We are phasing out ozone-depleting refrigerants, called HCFCs, but some are still in use. These are being replaced with HFC refrigerants that do not contain chlorine, so are ozone friendly, but are strong greenhouse gases and contribute to climate change. Processes are in place to manage and monitor their usage.

All new refrigeration units are hermetically sealed to prevent leaks. A control system is used, which eliminates the need for refrigerant analyzer gauges, through which refrigerant gases can escape.

We monitor and set targets to minimise the amount of refrigerant gases lost to the atmosphere, reviewing performance and policy at regular meetings. We publish our performance each year in this social and environmental report.

## Procurement and the environment

As one of the UK's largest purchasers of goods and services, we have an environmental influence that extends well beyond that of our own staff and workplaces.

We present the key aspects of our relationship with suppliers and how we promote environmental good practice in all our purchasing activities in [CSR and suppliers](#).

## Product stewardship

The term product stewardship is shorthand for the way companies ensure that the products they buy, use and sell are safe to use and have the lowest impact possible on the environment in use and disposal.

In the 2007 financial year, BT spent over £6.8 billion on products and services. By 2010, we will have invested up to £10 billion on our 21st century network.

We work with our suppliers to minimise the whole-life environmental impacts of products for which BT has a share of responsibility.

By collaborating with designers we can influence the way products are made and how they perform. For example, efficient products will minimise the materials and energy consumed throughout their lifecycle. The designs will help manufacturers to reduce the use of hazardous materials and ensure that the products can be reused, recycled or safely disposed of at the end of their life.

Practising product stewardship can reduce costs. For example, products can be designed to use the minimum resources during manufacture, use and disposal. Refurbishing used products for reuse can increase revenues and reduce the cost of landfill.

## Environmental legislation

Growing sales of electrical and electronic equipment (EEE) and reduced product lifetimes are leading to higher levels of disposal and an increase in waste. For example, although mobile phones are designed to last ten years, in the developed world they are replaced after just 18 months on average. Current practices for dealing with these wastes are not sustainable.

During the 2007 financial year, two European Directives came in to effect in the UK which seek to reduce the whole-life environmental impacts of EEE. These are the Restriction of the use of Certain Hazardous Substances (RoHS) regulations and the Waste Electrical and Electronic Equipment (WEEE) regulations.

The RoHS regulations aim to reduce the amount of hazardous materials used in EEE. This will reduce the risk of environmental contamination when they are disposed of, either from emissions to air during incineration or from chemicals leaching into the ground and water sources when buried in landfill sites.

Under the WEEE regulations, from July 2007 manufacturers, brand owners and importers of EEE will be responsible for arranging and paying for the treatment and recycling of end-of-life equipment. Retailers will also need to provide free take-back facilities for consumers wishing to dispose of old electrical equipment when purchasing equivalent new items. There will also be a national distributor take-back scheme, which will operate mainly at local authority recycling centres.

The regulations affect BT in three different ways:

- **As a producer** – Although BT does not manufacture EEE, we take responsibility for BT-branded electrical equipment and for equipment which BT imports into other European Union member states. To meet our obligations in the UK, BT has joined a Producer Compliance Scheme
- **As a distributor** – While BT no longer has any shops, we act as a distributor by selling BT-branded and other electrical equipment as an online retailer
- **As an end user** – BT relies heavily on EEE in our own business

We have carried out regular briefings about the regulations for buyers and product managers, and developed a computer-based training course to ensure all affected BT people are aware of their responsibilities.

We continue to contribute to the development of new regulations. BT is represented on the DTI stakeholder group helping to develop UK regulations which transpose the European Directive on Energy using Products (EuP), and the DEFRA steering group on the European Batteries Directive.

We also continue to work with industry bodies, such as the [UK Industry Council for Electronic Equipment Recycling \(ICER\)](#) and the [Information technology, telecommunications and electronics industries association \(INTELLECT\)](#).

## Product Recycling

BT aims to reduce the environmental impacts of using and disposing of our products and services.

It has been estimated that the standby energy consumption of electrical equipment in UK households and commercial premises accounts for over 7% of UK domestic electricity consumption. To reduce our contribution to climate change, we now require suppliers of the BT Home Hub to commit to meeting the EU Codes of Conduct for external power supplies and for broadband equipment.

We worked closely with Cisco Systems, a supplier of electronic equipment to businesses, to provide a take-back system in the UK and in other countries where we operate.

As BT prepares for the implementation of the UK WEEE regulations, we have paid more attention to recovering equipment for refurbishment and reuse. The reuse of network terminating equipment from customer premises and BT's exchanges has prevented the need to buy new equipment, and saved BT £11.65 million.

We are focusing on efficient use of resources by making use of items that would previously have been discarded. After rationalising the number of printers used in BT, we were left with a substantial number of printer cartridges which could not be used locally. We set up a redistribution process to make sure the cartridges were used elsewhere in BT. As well as the environmental benefits of the scheme, the cost savings were in excess of £46,000.

See the case study on recycling legacy equipment.

## Legacy equipment recovery and recycling

Information and communications technology has advanced at an unprecedented pace in recent decades. BT (operating at the time as Post Office Telecommunications and, later, British Telecom Plc) upgraded its network during the 1970s and 1980s from mechanical operations to switch and transmission technologies known as PDH. In the 1990s, BT upgraded again to faster technologies, known as SDH and DSL.

We are now preparing to implement the world's first, state of the art 21st century network. As part of this, BT Wholesale is reducing its energy, property and maintenance costs by removing obsolete network platforms, as retail products and customers transfer from old to new technologies.

It is important that BT makes the best use of our legacy assets. We estimate that the life expectancy of our PDH technology is five years, and we are focusing on removing this. A new legacy equipment recovery and recycling process has been created to do this efficiently and responsibly.

The PDH system is made up of electronic cards, and we estimate that we need to retain roughly 15,000 of these cards for maintenance purposes until the PDH platform has been completely removed. An audit team is reviewing our network management systems to identify equipment that is switched on but has no customer traffic. The equipment is switched off and the cards removed and checked to see if they are of a type that is still needed. Cards to be kept and reused are placed in protective anti-static bags and kept onsite. They are recorded on our network and inventory spares management (NISM) database, so that maintenance and repair engineers know they are available for use.

All removed cards that are not to be reused are considered scrap. Before the legacy equipment recovery and recycling process was established, these cards were placed in waste skips and sent to landfill as contaminated waste. Through the new process, redundant cards are placed in cages and sent to BT's approved disposal agent where they are recycled. As we are now paid for the redundant cards, the new process also generates revenue for BT.

To date, we have recovered 45,409 cards from 90 sites. 1,784 have been kept for reuse and the remainder have been sent for recycling, generating revenue of £14,000.

## Local environmental impacts

The impact of our activities sometimes affects people's immediate surroundings.

The infrastructure supporting our 28 million customer lines in the UK includes thousands of roadside cabinets and hundreds of radio stations. Our network is expanding and changing as technology progresses. We are conscious that this has a potential impact on the environment – countryside, skylines and cityscapes – and concerns all our stakeholders.

Our approach to local impact is embedded in our network planning rules and procurement policies. We have established channels to help stakeholders communicate with us about these issues.

In this section we discuss:

- [Graffiti](#)
- [Radio masts](#)
- [Antenna siting](#)
- [Electromagnetic fields \(EMFs\)](#)

## Electromagnetic Fields (EMFs)

Radio technology uses radio frequency (RF) fields, otherwise known as electromagnetic fields (EMF), to receive and transmit calls and data. Some people are concerned that exposure to RF may damage their health.

BT works to the exposure guidelines recommended by the Health Protection Agency. These guidelines are recommended by the EU and are defined by the International Commission On Non-Ionising Radiation Protection, an independent body of experts with no industry representatives. The commission examines all the scientific research pertaining to the area and sets precautionary guidelines with large safety margins to protect all members of the public. We have reviewed our sites to ensure they are below the guideline levels.

## Radio masts

Radio communication remains an important part of our network, particularly in rough terrain, such as the Scottish Highlands. We have around 300 radio stations in the UK. Radio masts can impair the beauty of the landscape. We have experimented with the use of satellite communications however radio masts will have to be used for some time.

When installing local mobile telephone networks in cities and towns we share space on radio masts and towers with many other radio operators. This helps to prevent the proliferation of structures and minimises the number of antennas.

## Graffiti

The Anti Social Behaviour Act 2003 gives local authorities the power to instruct BT to remove graffiti from its street furniture within a given time. BT works in partnership with local authorities to minimise graffiti and reduce the risk of this happening.

We repaint affected street cabinets and, in some local authority areas, treat them with an anti-graffiti coating. We have also spoken to suppliers about new street cabinets being finished with an anti-graffiti coating during manufacture.

BT Payphone kiosks are subjected to acts of vandalism and graffiti and are also covered by the Act. To minimise the effect on local communities, BT Payphones has set up a website where local authorities can report vandalised kiosks. This information is forwarded to BT Payphone contractors, who repair any damage.

## Antenna siting

BT's core radio network uses large, 3.7 metre diameter antennas. Within the next two years, with the exception of the west coast of Scotland, this service will no longer be required and the large antennas will be removed. BT will use only smaller diameter antennas for the access network on our towers.

We are also working with other service providers to use existing street furniture – lamp posts, telephone kiosks and telegraph poles, rather than installing new ones.

## Environmental Benefits

The use of information and communications technology (ICT) has the potential to benefit business (by increasing efficiency), the people doing business (by improving work-life balance) and the environment (by reducing consumption of finite resources).

We have been working with experts in this field to quantify the benefits of ICT to BT. A survey carried out by SustainIT and the University of Bradford evaluates the economic, environmental and social impacts of telephone and video [conferencing](#).

A second survey assesses the impacts of [e-working](#).

Here we summarise the surveys' findings on how ICT can help our organisation become more [agile](#).

## Supporting an agile organisation

We have implemented a large-scale home-based working project, called Workabout. This has enabled BT and its people to be more agile and efficient.

We implemented Workabout to reduce the cost of running our estate and to better support the many workstyles at BT. More details of these are in the [Employees section](#).

SustainIT and Bradford University conducted two new surveys of BT people in 2006, [E-working at BT](#) and [Conferencing at BT](#), to help us understand the economic, social and environmental impacts of Workabout, and the services that support it.

### E-working at BT

BT has over 13,000 home-based employees, who work at home an average 2.1 days per week.

- 88% are managers
- 88% have broadband at home
- 33% use wireless connections outside the home
- 17% have a mobile email handset
- 84% use telephone and video conferencing services.

Home-based working helps employees to maintain a good work-life balance:

- 30% say home-based working had reduced domestic tension
- 37% believe it would be impossible, or very difficult, to do their job if they couldn't work from home
- An average 4.4 hours a week are saved by not commuting to work
- 78% make more use of local services such as shops and sports facilities.

However, 46% felt more isolated from their work colleagues in the last two years, compared with 37% of our total workforce.

Home-based working has environmental benefits. Travel-related CO<sub>2</sub> emissions have reduced by 3,663 tonnes per year – 13% of the total company car fleet total.

54% of home-based workers believe they have printed less in the last two years whilst 13% believe they have printed more. This compares with our total workforce where 37% believe they have printed less and 21% believe they have printed more.

79% of our home-based workers – compared with 59% of our total workforce – feel their work performance has improved over the last two years.

Supporting BT work styles, 47% of BT people surveyed stated that conferencing services enabled them to work from home and 20 % whilst travelling.

### Conferencing

A survey of employees who use telephone and video conferencing showed these services have personal and business benefits:

- 67% of calls had definitely or probably replaced a face-to-face meeting
- 53% believed they had saved at least three hours of travelling as a result
- 68% believed conferencing has improved their work performance
- 54% think conferencing has improved their work-life balance.

Extending the survey results to BT as a whole, conferencing eliminates 338,607 face-to-face meetings each year and significantly reduces business travel:

- Each most recent call prevented an average 288 miles of travel
- 42% of avoided journeys would have been by car and 79% during peak travel times, suggesting that conferencing helps relieve congestion and pressure on public transport
- Conferencing saves at least 54,000 tonnes of travel-related CO<sub>2</sub> emissions per year
- Conferencing avoids £81 million of travel and subsistence costs, and frees up £54 million of management time. We estimate that these benefits are 10-15 times greater than the cost of conferencing services.

## Environment glossary

**ADSL:**

Asymmetric Digital Subscriber Line. ADSL transforms the existing twisted copper pairs between the local telephone exchange and the customer's telephone socket into a high-speed digital line.

**Audioconferencing:**

A conference enabling a number of people to communicate by voice over a telephone line.

**BREEAM:**

Building Research Establishment Environmental Assessment Method.

**Brown electricity:**

Electricity produced by burning fossil fuels.

**Bunded fuel tank:**

An above-ground fuel tank with a protective wall to prevent leakage.

**CFCs:**

Chlorofluorocarbons. Gaseous compounds used as refrigerants and propellants. Break down ozone in the atmosphere.

**CHP:**

CHP is a very efficient technology for generating electricity and heat together. A CHP plant is an installation where there is simultaneous generation of usable heat (normally for space heating) and power (usually electricity) in a single process. CHP typically achieves a 35-40% reduction in primary energy usage compared with conventional power stations where the heat goes to waste.

**CO<sub>2</sub>:**

Carbon dioxide.

**Data conferencing:**

A conference that enables users to book conferences over the internet, to share data or slides while in the conference, and to receive recordings or transcriptions after the conference call.

**DEFRA:**

The Department for Environment, Food and Rural Affairs (UK).

**Degree days:**

Degree days are a measure of the variation of outside temperature. Their use enables energy managers, building designers and users to determine how the energy consumption of the building is related to the weather, and allows energy-saving measures within the building to be monitored and compared year-to-year.

**ETNO:**

European Telecommunications Network Operators Association. It has produced an environmental charter, to which BT was a founder signatory.

**Green electricity:**

The government defines green energy in two ways:

Old green - This includes large-scale hydro, uncertified CHP and waste-to-energy. The green energy we currently purchase is old green and this is not exempt from the Climate Change Levy (CCL).

New green - New green refers to the technology and not the date of installation. Technology recognised as new green is: certified CHP; wind; wave; small-scale hydro and photovoltaic. New green energy receives an exemption from the CCL on a specific building basis.

GS13:

BT's environmental procurement standard for suppliers.

GS18:

BT's Sourcing with Human Dignity standard.

GS19:

BT's product stewardship standard.

Halons:

A group of potent ozone-depleting chemicals related to CFCs used in many fire extinguishers.

HCFCs:

Hydrochlorofluorocarbons. Alternative to CFC refrigerants.

Home-worker:

A person registered to work from home and provided with all the necessary furniture, equipment and communication links.

ICT:

Information and Communications Technology.

Intranet:

An internet-based technology that allows members of one organisation to share private information.

IP:

Internet Protocol. This is the set of communication tools that enables computers to 'talk' to each other over the internet.

ISO 14001:

An international environmental management system standard.

Kyoto Protocol:

A legally binding agreement signed in Japan in 1997 to reduce emissions of a basket of six greenhouse gases.

Montreal Protocol:

An international agreement to phase out the major chemicals that destroy ozone in the stratosphere.

NOX:

Oxides of nitrogen.

NO2:

Nitrogen dioxide.

OFCOM:

Office of Communications (UK regulator for the communications industries).

UK's Packaging Regulations:

These regulations require certain businesses to recover and recycle packaging waste. Targets for individual businesses are based on the overall amount of packaging (on products) that they supply to their customers.

PCNs & PCBs:

Substances classified as hazardous.

PDH:

Plesiochronous Digital Hierarchy

PM10 particulate:

Fine airborne particulate less than 10 microns in diameter.

Recycled paper:

Paper made from discarded and previously used paper.

SDH:

Synchronous Digital Hierarchy.

SF6

Sulphur hexafluoride. Sulphur hexafluoride is a man-made chemical, an unreactive, non-toxic heavy gas with no colour and no smell. Sulphur hexafluoride is a "greenhouse gas" - releasing it to the atmosphere contributes to global warming.

SOX:

Oxides of sulphur.

SO2:

Sulphur dioxide.

Street Works Notice:

A requirement of the New Roads and Street Works Act is that the Street Authority must be informed of certain types of street works when BT issues a notice. A notice serves a number of functions:

- It is part of the co-ordination process, especially in traffic sensitive streets and major projects
- For emergency and urgent works it can prompt emergency procedures of other organisations
- It triggers the inspection regime
- It forms the basis of the records for guarantee purposes
- It can help prevent damage
- It provides a basis of assessment whether works have been unreasonably prolonged (in England only).

Sustainable business:

A business that can sustain its own needs environmentally, socially and economically.

Sustainable development:

Development that allows us to meet the needs of our own generation without compromising the ability of future generations to meet their needs.

SUSTEL (Sustainable Teleworking):

A two-year research project financed by the European Commission on the impacts of teleworking.

Teleworking:

Working from outside a conventional office by using advanced telecommunications like video conferencing.

TRIAD:

TRansmission Infrastructure And Demand charge. Agreements to use standby generators in order to manage electrical loads at times of peak demand.

UNEP:

United Nations Environment Programme.

Videoconferencing:

A meeting where two or more people communicate through networked cameras that relay pictures and sound to all of the participants.

VOCs:

Volatile organic compounds, a widely used group of chemicals which when released into the atmosphere help to form damaging low-level ozone, harmful to human health and animal and plant life.

WEEE:

The EU Waste and Electronic Equipment directive.

## Environment helpdesk

This page is for enquiries and comments relating to BT's environmental performance and the way we report on our environmental impacts.

**Please note:** If you have a general customer enquiry go to [Contact us](#). If you have a complaint about our external operations or network – such as the sighting of a pole or mast, damage to property or graffiti – please go to [Complaints about our services](#).

For complaints about the unsatisfactory state of BT buildings and/or grounds, call 0800 223388. For any Payphone related issues, e.g. noise disturbance, call 0800 661610.

**It is important that you use the appropriate channel because it enables us to direct your enquiry or complaint to the correct department, follow it up and keep you informed.**

This page is for feedback or questions (not complaints) relating to BT and the environment. Please contact us with your questions and comments at the following:

By telephone:

Freephone: 0800 731 2403

International callers please use: +44 117 302 5097

By e-mail:

[bt.environment@bt.com](mailto:bt.environment@bt.com)

By post:

BT Environment Unit

Postal Point NS1A2

North Star House

North Star Avenue

Swindon

Wiltshire SN2 1BS

## Environment - Key Performance Indicators

| Indicator                              | Description                             | Measure  | Target   |
|--|---|--|--|
| <b>Global Warming CO2 emissions</b>    | A measure of BT's climate change impact | 2007 financial year UK CO2 emissions were 0.64 million tonnes, 60% below the 1996 level. | 2016 CO2 emissions to be 80% below 1996 levels.  |
| <b>Waste to landfill and recycling</b> | A measure of BT's use of resources      | 54,921 tonnes to landfill (58%), 40,007 tonnes recycled (42%).                           | To reduce the tonnage of waste sent to landfill by 8% (excluding waste arising from the 21CN network programme). |

## Environment Targets

| Start Date | End Date      | Description  | Update | Target Status |
|------------|---------------|--|--------|---------------|
| April 2007 | December 2016 | BT will reduce its carbon dioxide emissions (measured in tonnes CO2 equivalent) to 80% below 1996 levels.  |        | New           |
| April 2007 | December 2012 | 20% of BT's employees will be actively engaged in reducing carbon footprint at work and at home.   |        | New           |
| April 2007 | March 2009    | BT will complete the design for BT's Data Centre of the future and start rolling out to the estate.  |        | New           |
| April 2007 | December 2008 | BT will inform BT employees of the impacts of climate change and what they can do to help mitigate these impacts (this will form part of the engagement plan.)   |        | New           |
| April 2007 | March 2008    | BT will execute both internal and external Climate Change communications plans.  |        | New           |
| April 2007 | March 2008    | BT will produce a report on energy efficiency options, possible targets and labelling for key consumer products.   |        | New           |
| April 2007 | March 2008    | BT will produce a study of energy efficiency options, possible targets and labelling for key business products.  |        | New           |
| April 2007 | March 2008    | BT will introduce environmental management systems into two non UK geographies.  |        | New           |
| April 2007 | March 2008    | We will research and produce a report on the data collection requirements which would enable the carbon footprint* of a BT branded product to be identified. (* Carbon footprint - the energy consumption associated with the product throughout its whole lifecycle.) |        | New           |
| April      | March 2008    | We will assess the feasibility of using alternatives   |        | New           |

|            |            |  |     |
|------------|------------|--|-----|
| 2007       |            | to bromine based flame retardants in BT branded telephones, modems and routers.  |     |
| April 2007 | March 2008 | BT will control the amount of HCFC/CFC refrigerant lost to the atmosphere to no more than 4% of the total held in BT's operational estate.   | New |
| April 2007 | March 2008 | BT will control the amount of HFC refrigerant lost to the atmosphere to no more than 7% of the total held in BT's operational estate.  | New |
| April 2007 | March 2008 | We will reduce the amount of CFC/HCFC's installed in the BT operational estate by 5%.  | New |
| April 2007 | March 2008 | BT will control the amount of HCFC/CFC refrigerant lost to the atmosphere to no more than 7% of the total held in BT's non-operational estate.   | New |
| April 2007 | March 2008 | BT will control the amount of HFC refrigerant lost to the atmosphere to no more than 7% of the total held in BT's non-operational estate.  | New |
| April 2007 | March 2008 | BT will implement energy savings measures to deliver energy reduction of 5GWh across the UK data centre estate.  | New |
| April 2007 | March 2008 | BT will pressure test 1000 of its fuel storage tanks.  | New |
| April 2007 | March 2008 | BT will decommission 200 buried tanks and replace them with internal double-skinned tanks.   | New |
| April 2007 | March 2008 | BT will reduce the amount of waste sent to landfill by 8% based on the March 2007 outturn figure. NB excluding activity arising from the 21CN network and property strategy projects.  | New |
| April 2007 | March 2008 | BT will improve or maintain the percentage of waste recycled against the total waste generated from normal BT operations compared to 2006/07 performance.  | New |
| April 2007 | March 2008 | BT will implement dedicated recycling stations at up to 15 of its major office buildings. In addition, we will review waste skip provision at around 150 major operational buildings and TEC's with the aim of replacing open top skips with alternative containers and recycling facilities.  | New |
| April 2007 | March 2008 | BT will review with Telereal participation by their contractors in the Considerate Constructor Scheme providing dedicated recycling processes for major refurbishment projects.  | New |
| April 2007 | March 2008 | BT will assess the fuel saving benefit from 50 commercial vehicles used by drivers trained on fuel-efficient driving techniques.   | New |
| April 2007 | March 2008 | BT will order all new light commercial vehicles that will limit speed to a maximum speed set of 70mph.   | New |
| April 2007 | March 2008 | BT will hold an event with its Suppliers to engage them on Procurement's CSR goals including Climate Change, the Procurement Principles and drive progress towards the Vision "harness communications to tackle climate change"  | New |
| April 2007 | March 2008 | There will be evidence of follow up action taken within 3 months relating to all suppliers who have been identified as requiring continuous improvement as a result of completing our CSR questionnaires   | New |
| April 2007 | March 2008 | BT will implement the following Climate Change Procurement Principles to incorporate energy consumption and environmental factors into our procurement processes over the coming year: <ul style="list-style-type: none"> <li>• We will harness the capability, diversity and innovation of our supply base to add value to our business and encourage suppliers to offer solutions which have a reduced environmental impact.</li> <li>• That the energy consumption and environmental impact of a product or service (from manufacture, through usage, to disposal) is a mandatory criterion in all tender adjudication.</li> <li>• That the energy consumption and environmental</li> </ul> | New |

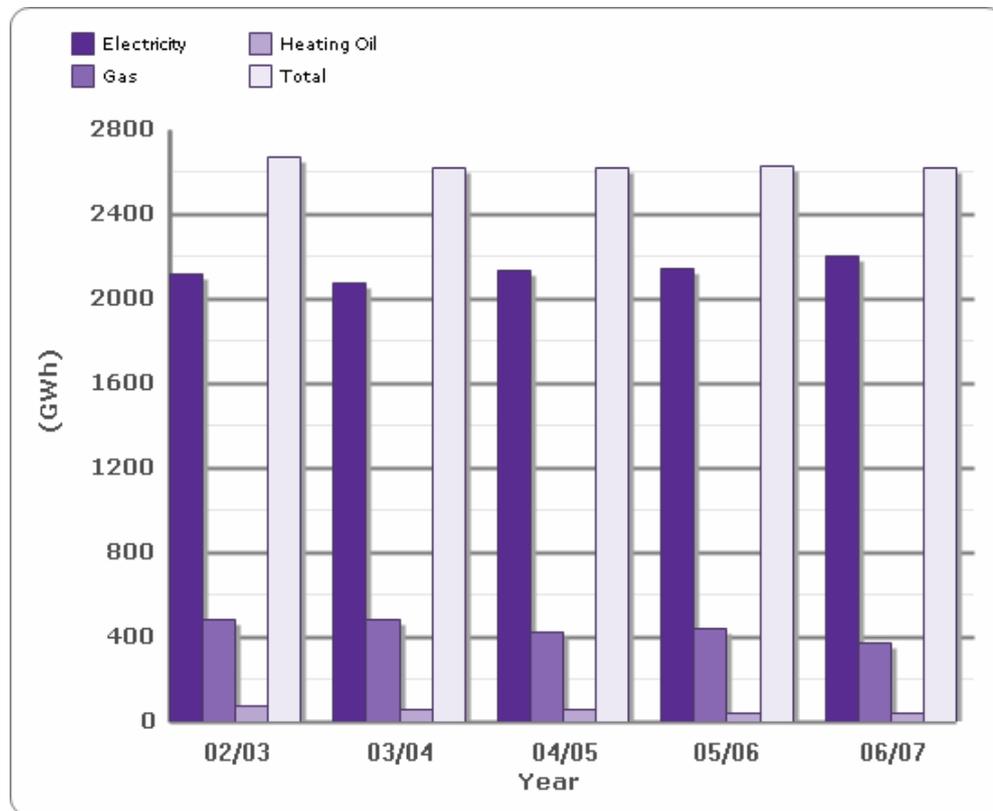
|                   |                       |   |   |           |
|-------------------|-----------------------|---|---|-----------|
|                   |                       | impact of any replacement product or service (from manufacture, through usage, to disposal) is less than its predecessor.   |   |           |
| <b>April 2007</b> | <b>March 2008</b>     | BT will publish the findings of its 2007 staff survey, which assessed the social and environmental impacts arising from the use of conferencing services within BT. |   | New       |
| <b>April 2007</b> | <b>December 2007</b>  | BT will begin a trial on hybrid vehicles in collaboration with a manufacturer.  |   | New       |
| <b>April 2007</b> | <b>September 2007</b> | BT will define a roadmap for establishing an EMS in all countries.  |   | New       |
| <b>April 2007</b> | <b>August 2007</b>    | BT will roll out a Climate Change road-show.  |   | New       |
| <b>April 2006</b> | <b>March 2007</b>     | BT will develop a Product Manager's PS Toolkit for use at a new product launch.   | The Tool Kit has been completed with all the elements of the toolkit; training, eco design guidelines and checklist, legislative summary and FAQ, etc available to BT product Managers.   | Completed |
| <b>April 2006</b> | <b>March 2007</b>     | BT will assess the potential for improving the standby power consumption of external power supplies used by BT products.  | A report has been produced on the work carried out. The conclusion from this work was that there was substantial scope for improvement.   | Completed |
| <b>April 2006</b> | <b>March 2007</b>     | BT will control the net usage of HCFC/CFC refrigerant to no more than 4% of the total held in BT's operational estate.  | The total net usage of CFC/HCFC's for the year was 3.31%  | Completed |
| <b>April 2006</b> | <b>March 2007</b>     | BT will control the net usage of HFC refrigerant to no more than 7% of the total held in BT's operational estate.   | The total net usage of HFC's for the year was 3.37%   | Completed |
| <b>April 2006</b> | <b>March 2007</b>     | BT will reduce the amount of CFC/HCFC's installed in the BT operational estate by 5%.   | We reduced the amount of ozone-depleting gases held in our systems by 3.27% as a result of plant replacement or building closures but unfortunately, we didn't manage to meet the target. | Completed |
| <b>April 2006</b> | <b>March 2007</b>     | BT will control the net usage of HCFC/CFC refrigerant to no more than 10% of the total held in BT's non-operational estate.   | The total net usage of CFC/HCFC's for the year was 1.17%  | Completed |
| <b>April 2006</b> | <b>March 2007</b>     | BT will control the net usage of HFC refrigerant to no more than 10% of the total held in BT's non-operational estate.  | The total net usage of HCF's for the year   | Completed |

|                   |                   |  |  |           |
|-------------------|-------------------|--|--|-----------|
|                   |                   |  | was 4.09%  |           |
| <b>April 2006</b> | <b>March 2007</b> | BT will install and evaluate the benefits of installing remote profile based gas metering at 30 typical sites with the BT estate.  | The target was been completed with gas meters installed at 31 sites.   | Completed |
| <b>April 2006</b> | <b>March 2007</b> | BT will reduce metered Water used BT in Premises by 2% from the 05/6 outturn.  | We achieved this target with an 8% reduction in water consumption.   | Completed |
| <b>April 2006</b> | <b>March 2007</b> | BT will pressure test 300 of its fuel storage tanks.   | The number of tanks tested was 795.  | Completed |
| <b>April 2006</b> | <b>March 2007</b> | BT will ensure that it's planning and implementation processes for cable works include full reference to environmental issues.   | A number of documents have been now amended to include full reference to environmental issues. The changes covered environmental legislation, land designation, where additional permissions are required and installing in environmentally sensitive areas. All changes have been communicated to planning staff. | Completed |
| <b>April 2006</b> | <b>March 2007</b> | BT will reduce the amount of waste sent to landfill (measured in tonnes) by 5% based on the March 2006 outturn figure. (NB excludes activity arising from the 21CN network and property strategy project work).                              | The amount of waste sent to landfill reduced from 59,665 tonnes to 54,921 tonnes a decrease of 8%.   | Completed |
| <b>April 2006</b> | <b>March 2007</b> | BT will improve or maintain the percentage of waste recycled against the total waste generated from normal BT operations compared to 2005/06 performance.  | We increased the amount of waste we recycled increased from 41.5% last year to 42.14%.   | Completed |
| <b>April 2006</b> | <b>March 2007</b> | BT will review ownership of all waste disposal streams generated by BT. The study will also address the responsibilities for consultation on new waste related legislation and the consolidated response arrangement to consultative bodies. | Following and extensive review, under the overall control of the BT Waste Forum, the BT Waste Products Guide was re-issued in June 2006. Additionally, a review was carried out to identify the  | Completed |

|                   |                   |   |  |           |
|-------------------|-------------------|---|--|-----------|
|                   |                   |   | process owners for the various waste items detailed in the Waste Guide. This was produced to assist the Waste Forum by identifying the respective individual owners and included legislative responsibility. |           |
| <b>April 2006</b> | <b>March 2007</b> | BT will undertake a survey of BT people to assess the personal and business benefits of the use of conferencing services.   | The survey completed in July 2006 and is available on our online report site.  | Completed |
| <b>April 2006</b> | <b>March 2007</b> | As part of the roll out of BT's 21CN next generation network, BT will implement a sub metering strategy at 30 of its 'pathfinder' sites.  | Sub metering is included in the scope of the Infrastructure design for Pathfinder sites. Metering has been installed at some sites in preparation for equipment installation.                                | Delayed   |
| <b>April 2006</b> | <b>March 2007</b> | BT will aim to achieve ISO 14001 certification for its operations in Belgium and introduce an environmental management system for operations in Germany.                              | Due to re-organisation, the EMS for Germany was not completed this year. Additionally, the ISO 14001 assessment in Belgium will not take place until quarter 1 this year.                                    | Failed    |
| <b>April 2006</b> | <b>March 2007</b> | BT will reduce the energy consumption required in wet heated building i.e. gas and oil, by 2% weather corrected from the 05/6 outturn. (N.B. excludes network electrical consumption) | Heating energy efficiency, weather corrected, decreased by 4% during the year. Therefore, we failed to meet our 2% improvement target.   | Failed    |
| <b>April 2005</b> | <b>March 2010</b> | BT will, as a direct result the installation of its new 21st Century multi- service access network, deliver a 30% line for line energy reduction.                                     | BT continues to make good progress with it's 21CN program.   | On Target |
| <b>April 2005</b> | <b>March 2006</b> | We will verify the amount of refrigerant stock held by our Facilities contractor with a view to target setting on usage for 2006/7.   | This work has been delayed. However, a series of audits being carried out by the Monteray EO   | Delayed   |

|                   |                   |   |   |  |
|-------------------|-------------------|---|---|--|
|                   |                   |   | Audit Compliance Team is now underway and the results are due in July 2007.   |  |
| <b>April 2003</b> | <b>March 2010</b> | BT will reduce its carbon dioxide emissions (measured in tonnes CO2 equivalent) to 25% below 1996 levels. | We are currently on target to meet this objective. However, we have now superseded this with a more challenging target of an 80% reduction by 2016. |  |

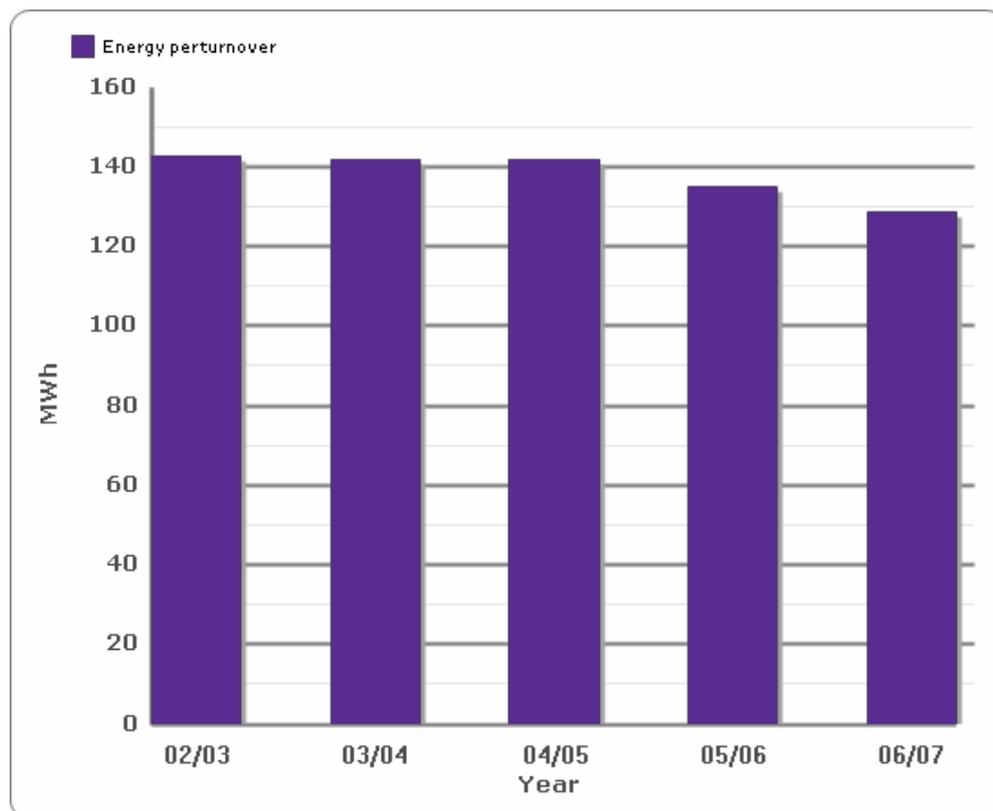
### Energy consumption



Excludes BT Global Services outside the UK.

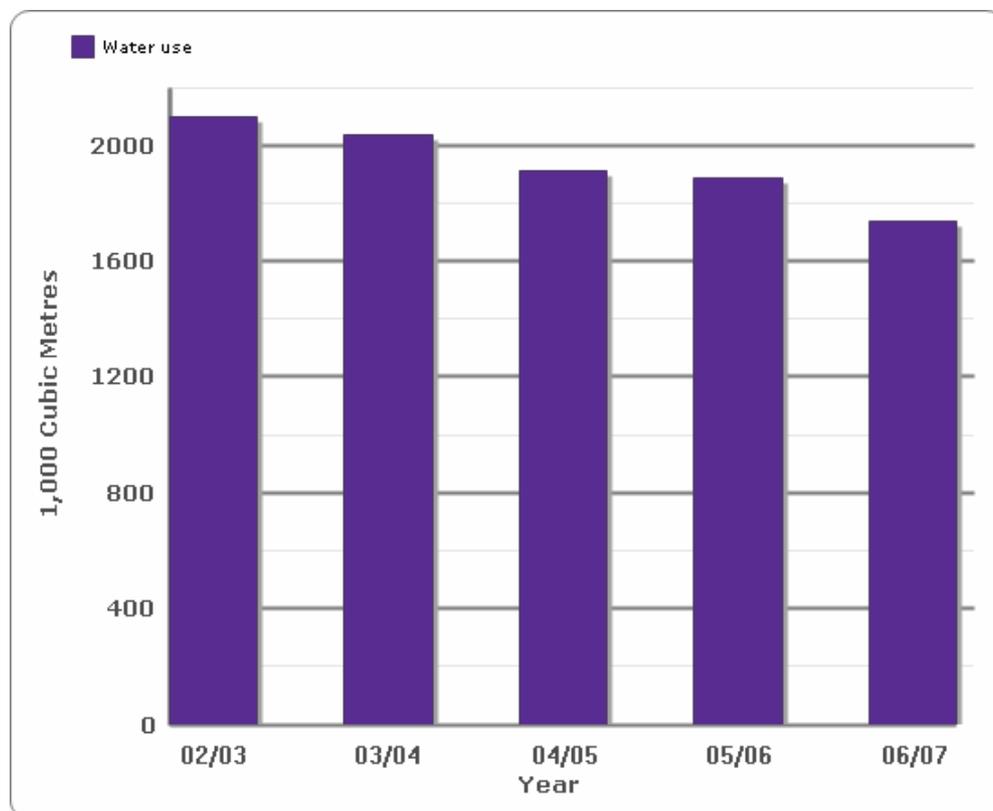
Source: Invoices (not weather corrected). Figures include BT plc, BT Northern Ireland & Manx Telecom. Figures exclude Subsidiary companies and BT Tenants

## Energy Consumed per £m Turnover



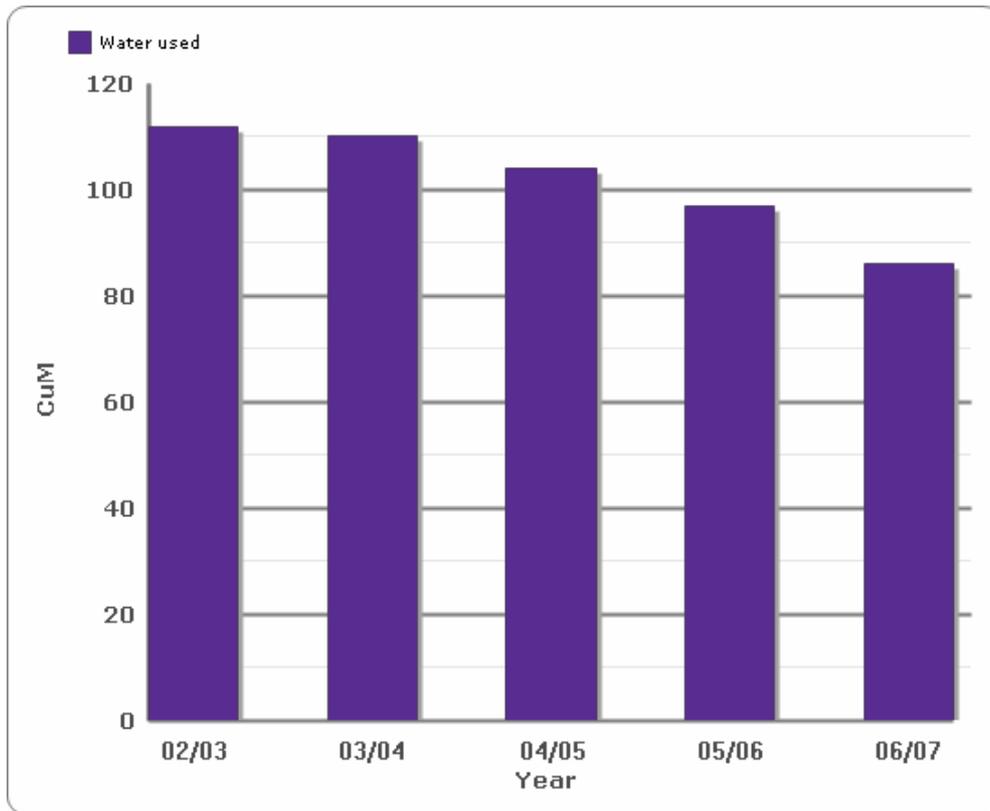
Excludes BT Global Services outside the UK  
Source: Annual Report & Accounts, Energy Database

## Water use



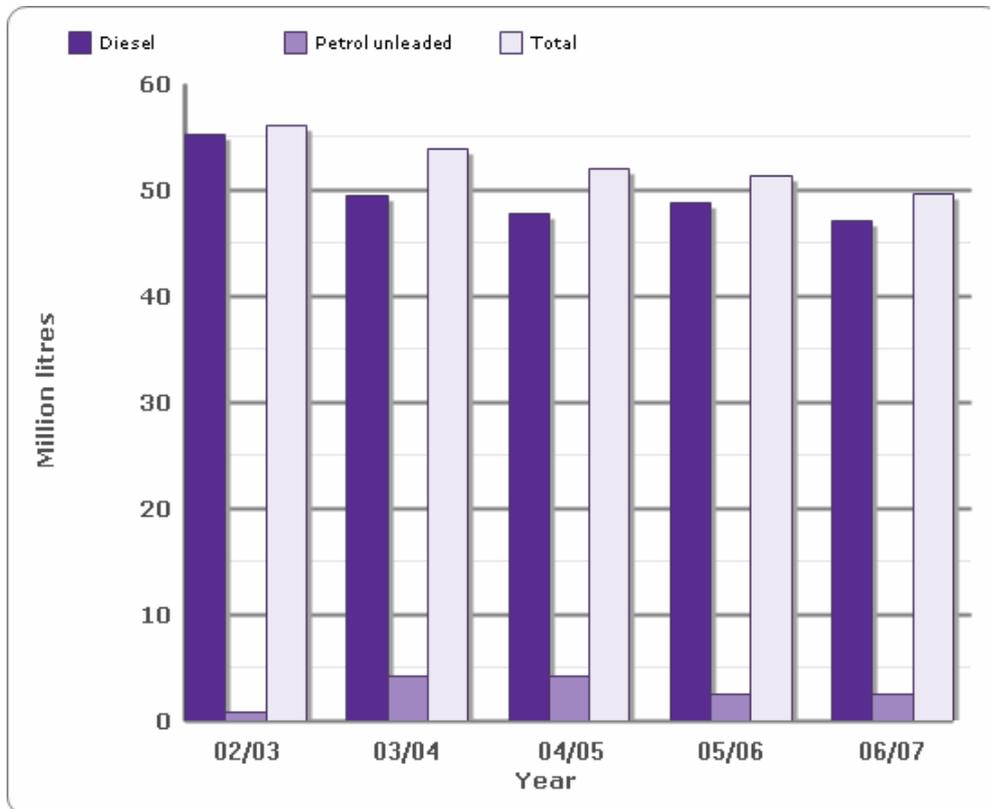
Excludes BT Global Services outside the UK  
Source: Invoices (not weather corrected). Figures include BT plc, BT Northern Ireland & Manx Telecom. Figures exclude Subsidiary companies and BT Tenants

## Water consumed per £m Turnover



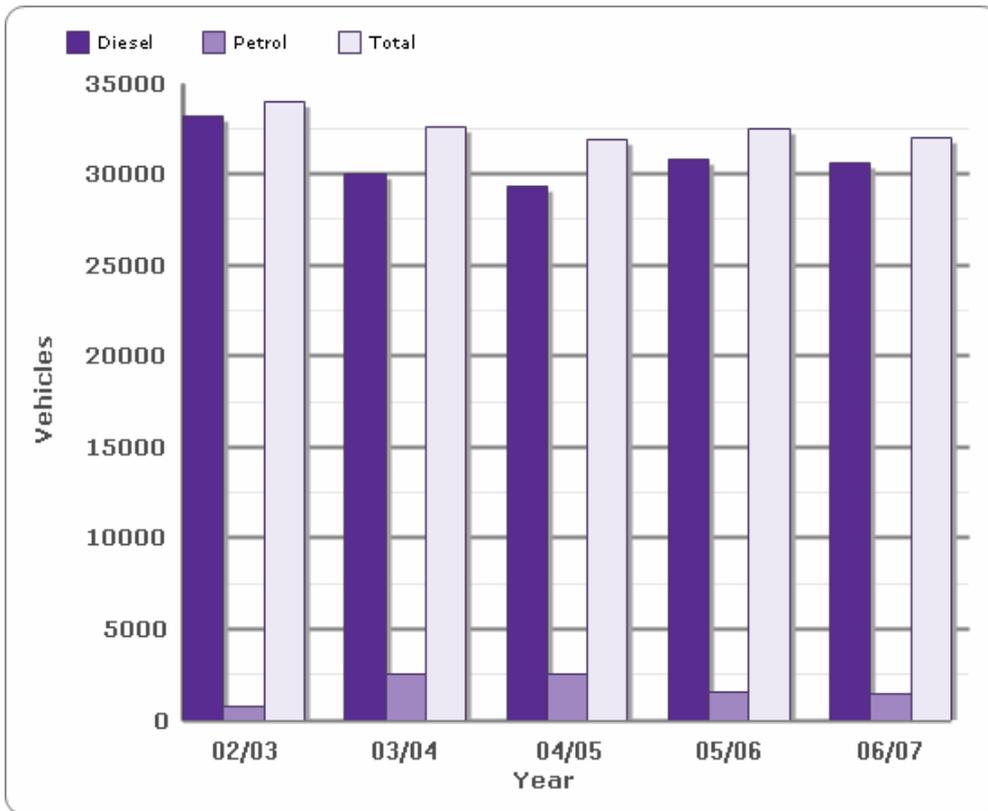
Excludes BT Global Services outside the UK.  
Source: Annual Report & Accounts, Energy Database

## Fuel used by BT's Commercial Fleet



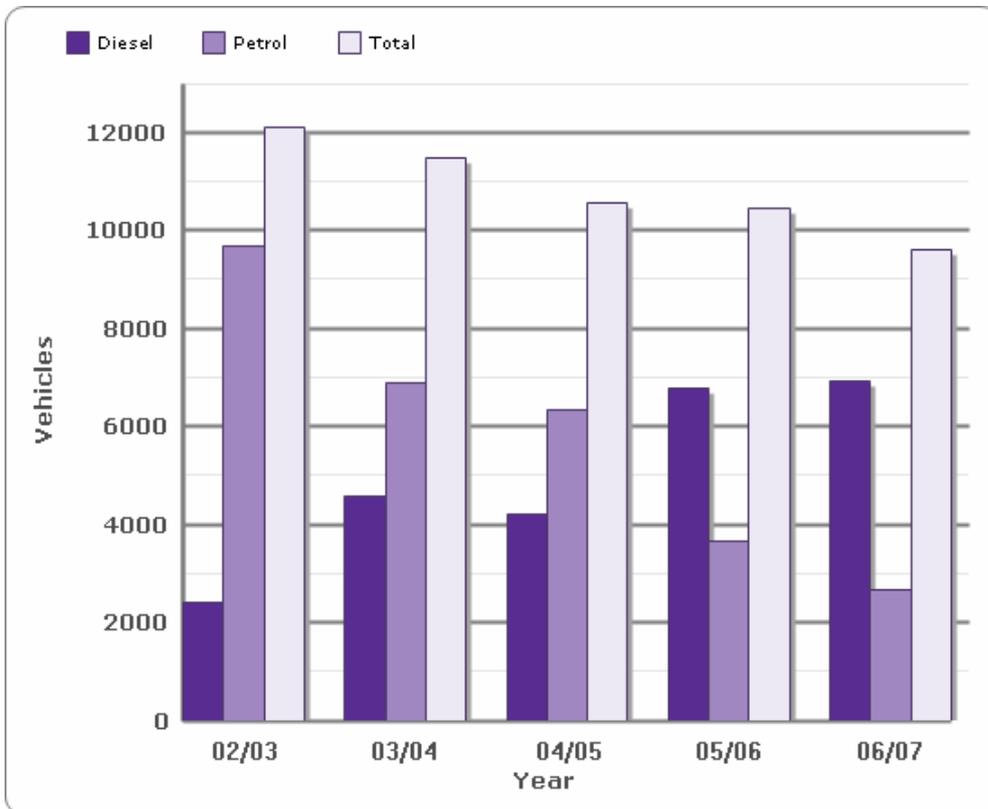
Excludes BT Global Services outside the UK  
Source: BT's Vehicle Database

## Number of Vehicles in BT's Commercial Fleet



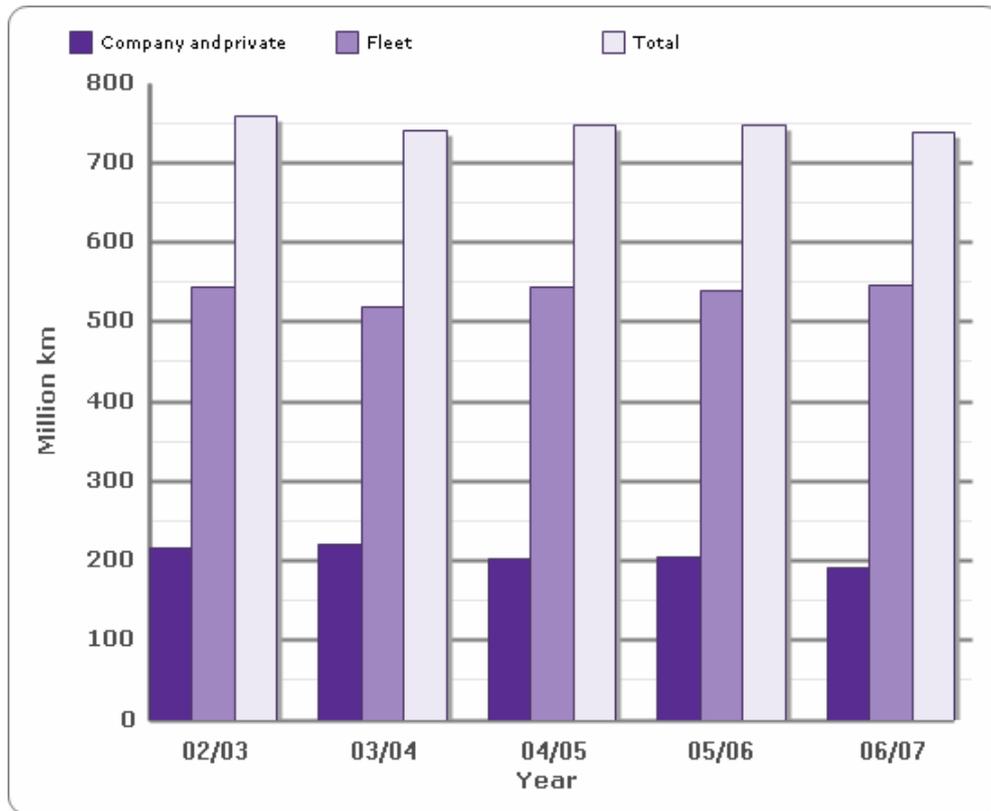
Excludes BT Global Services outside the UK  
Source: BT's Vehicle Database

## Number of Vehicles in the Company Car Fleet



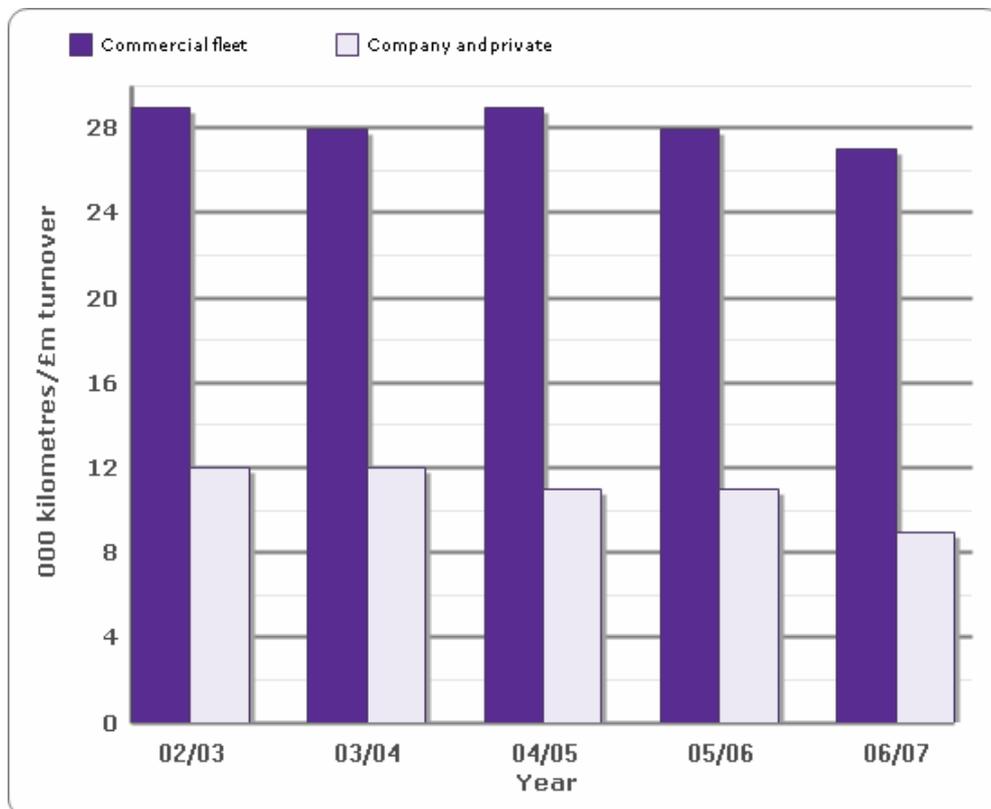
Excludes BT Global Services outside the UK  
Source: BT's Vehicle Database

## Distance travelled by vehicles on BT Business



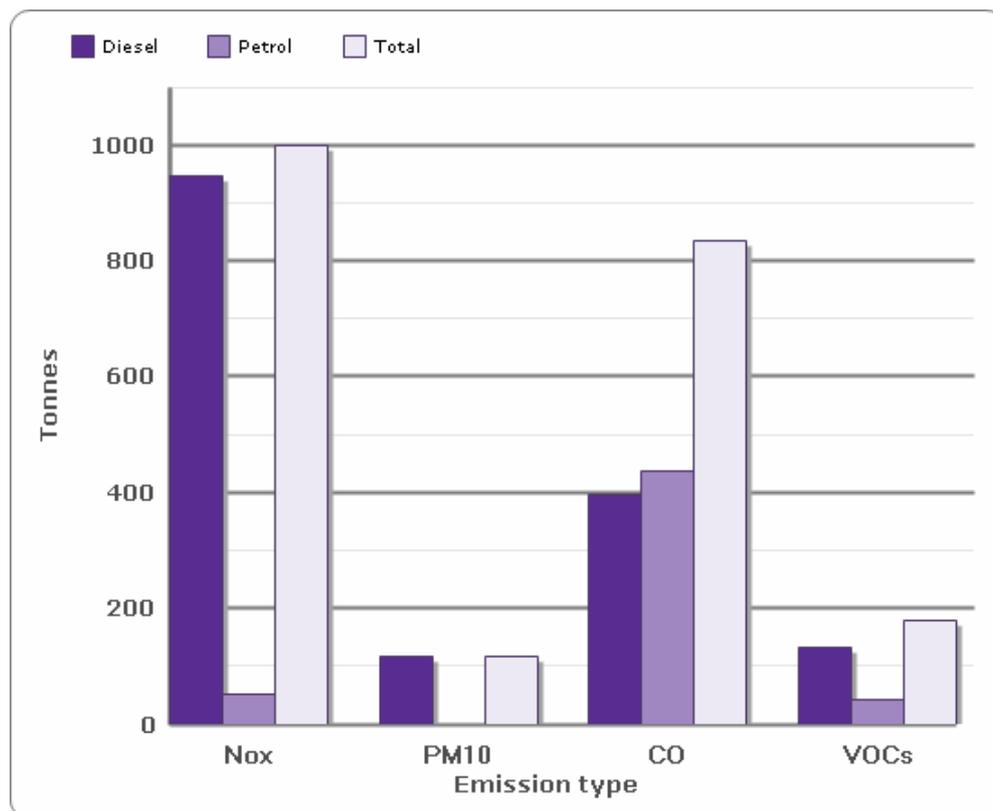
Excludes BT Global Services outside the UK.  
Source: BT's Vehicle Database & Business Expense Claims

## Distance Travelled per £m Turnover



Excludes BT Global Services outside the UK  
Source: Annual Report & Accounts, Transport Database

## Emissions from vehicles travelling on BT Business



Excludes BT Global Services outside the UK.  
Source: NETCEN (AEA Technology)

## 2007 UK CO2 Model

| BT Carbon Dioxide (CO2 equivalents) Model |   | Base Year            |                    |                    |                    |                    |
|---|---|----------------------|--------------------|--------------------|--------------------|--------------------|
| Emission Source                           |   | 96/97 (Base)         | 03/04              | 04/05              | 05/06              | 06/07              |
|   |   | Amount (kg)          | Amount (kg)        | Amount (kg)        | Amount (kg)        | Amount (kg)        |
| SCOPE 1                                   | Stationary Combustion                   |                      |                    |                    |                    |                    |
|   | Electricity Production - Oil Combustion | Note 2               | 9,030,000          | 6,450,000          | 3,671,315          | 1,878,311          |
|   | Gas Combustion                          | 110,770,000          | 92,599,797         | 81,196,740         | 83,794,467         | 71,270,559         |
|   | Oil Combustion                          | 66,500,000           | 15,677,851         | 14,352,750         | 10,342,249         | 10,055,239         |
|   | Refrigeration Gases (HFCs and SF6 only) | Note 2               | 886,004            | 2,406,894          | 1,433,998          | 3,240,410          |
|   | Commercial Fleet Diesel                 | 167,232,000          | 131,282,272        | 126,699,464        | 129,340,509        | 125,686,194        |
|   | Commercial Fleet Petrol                 | 18,480,000           | 9,951,175          | 9,603,799          | 5,933,994          | 5,162,533          |
|   | Company Car Diesel                      | 24,021,000           | 8,182,973          | 11,153,473         | 15,392,853         | 15,937,594         |
|   | Company Car Petrol                      | 16,296,000           | 25,513,068         | 17,303,091         | 12,072,696         | 9,273,486          |
|   | <b>Total Scope 1 Emissions</b>          | <b>403,299,000</b>   | <b>293,123,140</b> | <b>269,166,211</b> | <b>261,982,081</b> | <b>242,504,326</b> |
| SCOPE 2                                   | Purchased Electricity                   |                      |                    |                    |                    |                    |
|   | Grid Electricity                        | 1,202,340,000        | 182,898,288        | 132,827,077        | 18,006,138         | 12,694,005         |
|   | CHP (low CO2) Electricity               | 0                    | 411,252,000        | 307,424,890        | 310,791,276        | 328,835,505        |
| <b>Total Scope 2 Emissions</b>            | <b>1,202,340,000</b>                    | <b>594,150,288</b>   | <b>440,251,967</b> | <b>328,797,414</b> | <b>341,529,510</b> |                    |
| <b>Combined Scope 1 &amp; 2 Emissions</b> |   | <b>1,605,639,000</b> | <b>887,273,428</b> | <b>709,418,178</b> | <b>590,779,495</b> | <b>584,033,836</b> |

|         |   |        |            |            |            |            |
|---------|---|--------|------------|------------|------------|------------|
| SCOPE 3 | Cars on BT Business (Diesel)              | Note 1 | 600,521    | 600,826    | 1,805,450  | 1,642,309  |
|         | Cars/Motorcycles on BT Business (petrol)  |        | 3,584,361  | 3,785,867  | 1,420,477  | 1,033,503  |
|         | Refrigeration Gases (CFCs and HCFCs only) | Note 2 | 6,727,767  | 7,763,662  | 4,375,817  | 6,388,124  |
|         | Rail travel                               | Note 2 | 12,168,782 | 13,484,611 | 14,594,061 | 13,826,495 |
|         | Air Travel (short haul)                   | Note 2 | 4,711,583  | 6,006,193  | 7,553,833  | 7,328,436  |
|         | Air Travel (long haul)                    | Note 2 | 7,000,831  | 6,029,284  | 7,864,527  | 8,802,487  |
|         | Hire Cars (Diesel)                        | Note 2 | 1,163,209  | 2,670,362  | 2,085,571  | 2,896,157  |
|         | Hire Cars (Petrol)                        | Note 2 | 12,316,408 | 12,777,391 | 5,409,009  | 9,340,850  |
|         | Total Scope 3 Emissions                   | 0      | 48,273,461 | 53,118,196 | 45,108,745 | 51,258,362 |

**Total CO2 emissions (kgs)** 1,605,639,000 935,546,889 762,536,374 635,888,240 635,292,197

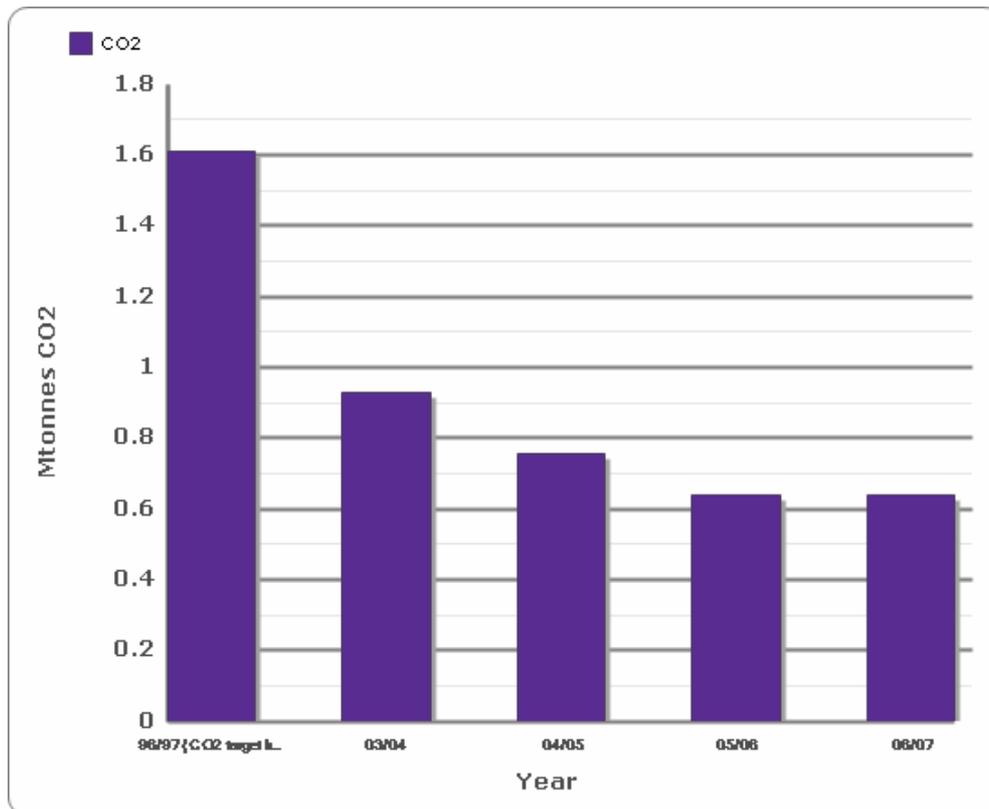
Source: Invoices, BT vehicle database, BT refrigerants database, BT expenses unit, BT travel management, DETR,

AEAT NETCEN

Notes: 1. Included in company car data

2. Data not available

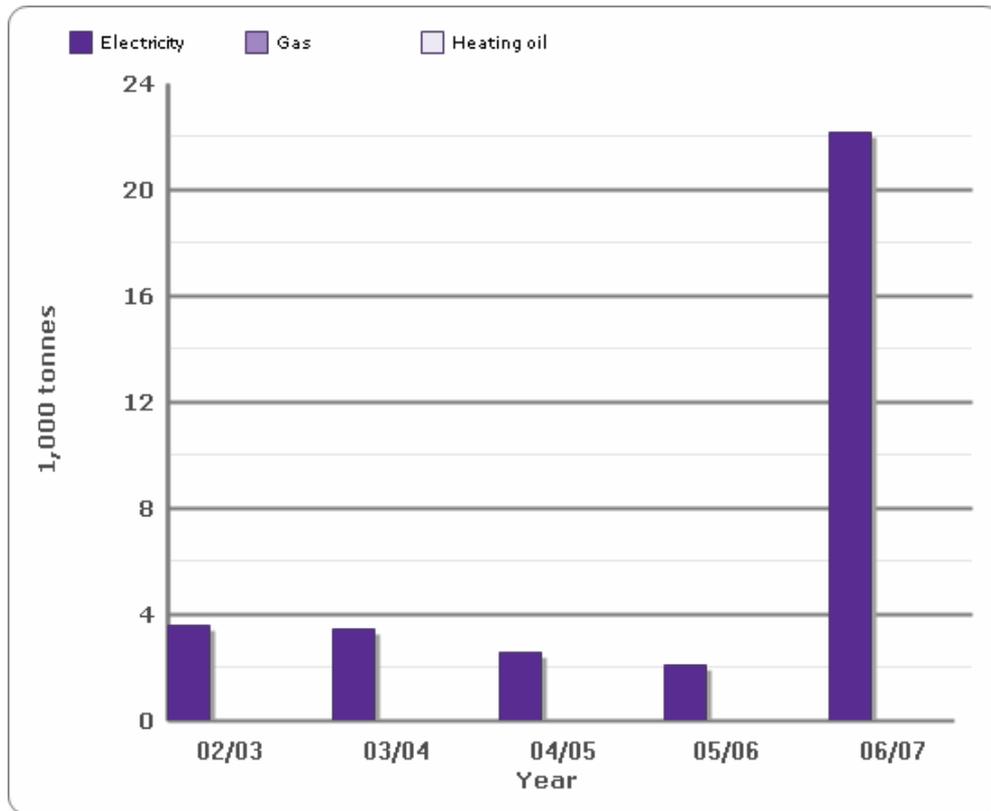
## CO2 equivalent emissions



Excludes BT Global Services outside the UK. (96/97 is the CO2 target base year)

Source: Invoices, BT vehicle database, BT refrigerants database, BT expenses unit, BT travel management, DETR, AEAT NETCEN

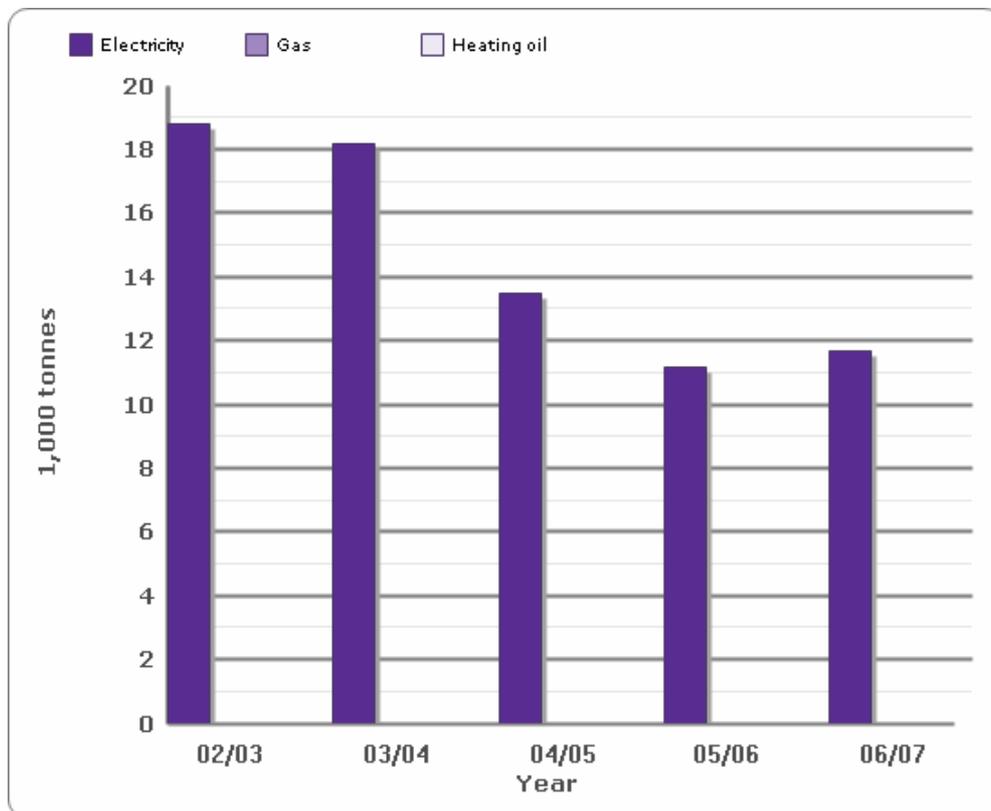
## Emissions of Nox



Excludes BT Global Services outside the UK

Source: Emissions derived using Government conversion factors. Figures include BT plc, BT Northern Ireland & Manx Telecom. Figures exclude Subsidiary companies and BT Tenants

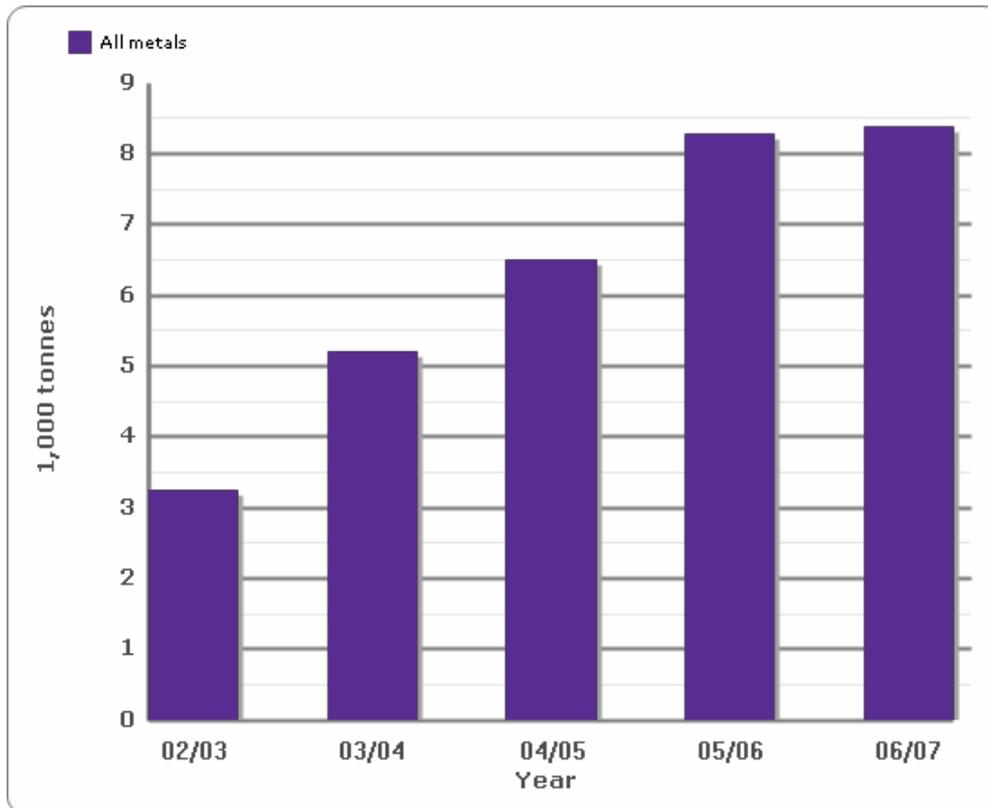
## Emissions of SO2



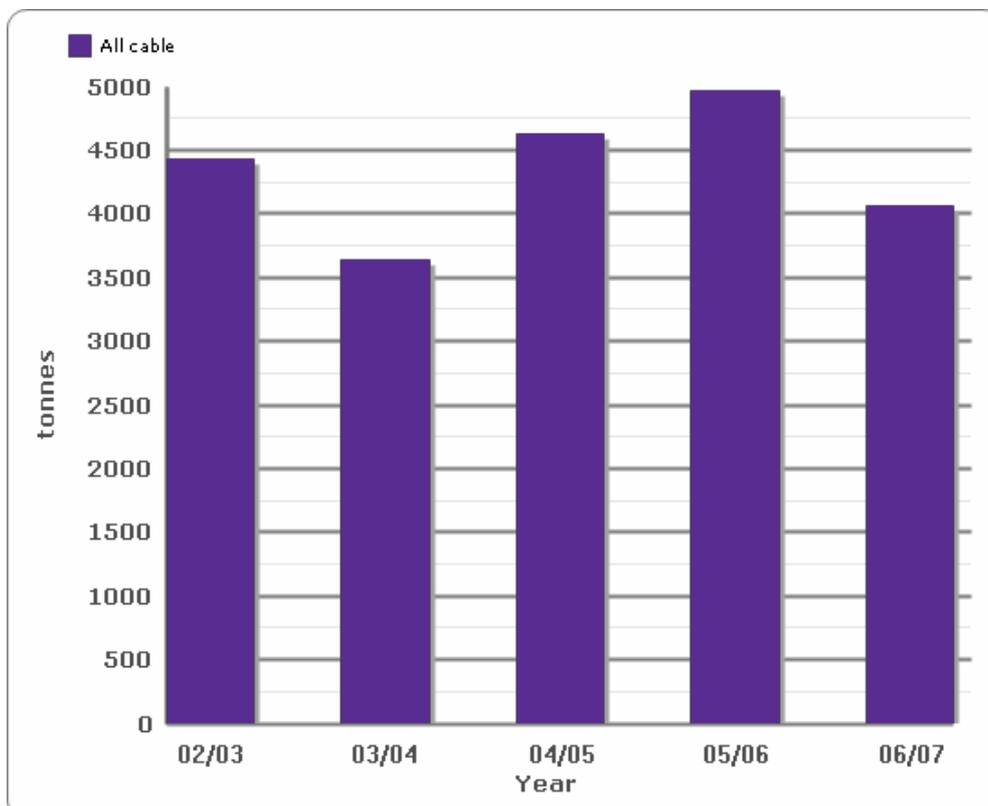
Excludes BT Global Services outside the UK

Source: Emissions derived using Government conversion factors. Figures include BT plc, BT Northern Ireland & Manx Telecom. Figures exclude Subsidiary companies and BT Tenants

## Scrap metal recovered



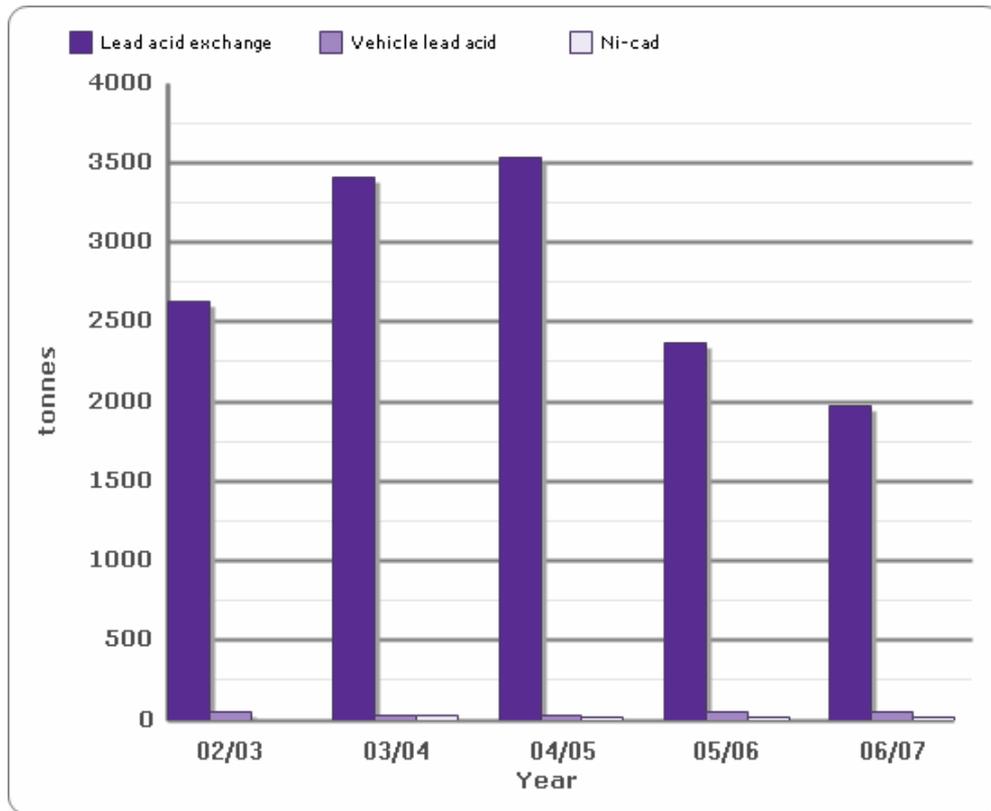
## Quantities of scrap cable recycled



Excludes BT Global Services outside the UK.

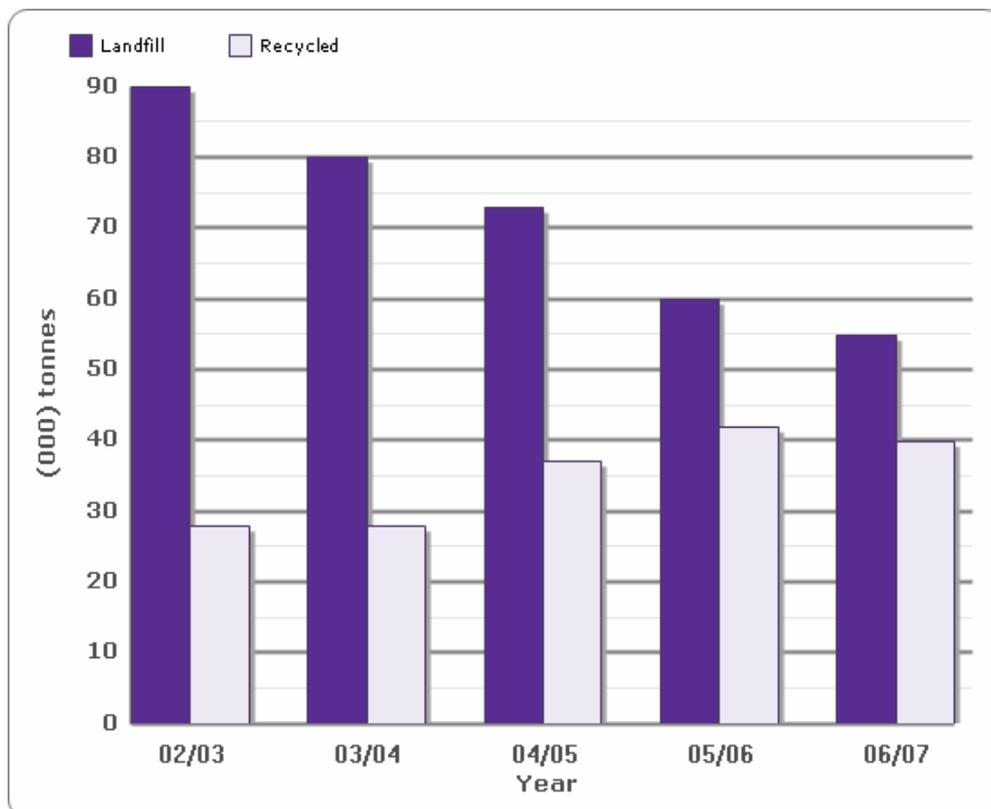
Source: Contractors

## Quantities of batteries recycled



Excludes BT Global Services outside the UK.  
Source: Contractors

## Waste arising and management



Excludes BT Global Services outside the UK.  
Source: Contractors

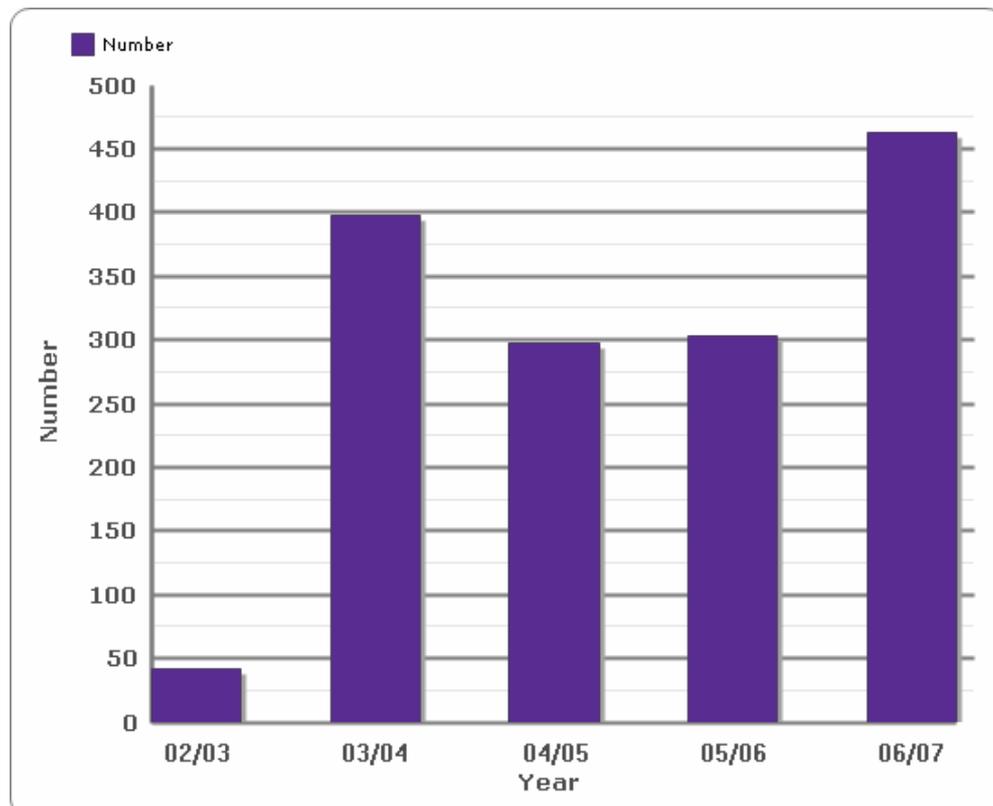
## 2007 Waste Recovery Model

| Waste Type (tonnes)                 | 2003        | 2004        | 2005        | 2006        | 2007        |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|
| <b>Cable</b>                        |             |             |             |             |             |
| Switchboard cable                   | 685         | 559         | 630         | 894         | 437         |
| Mixed cable                         | 965         | 577         | 1411        | 1573        | 1877        |
| Aerial Self Supporting cable        | 874         | 806         | 728         | 653         | 390         |
| Polythene covered cable             | 790         | 765         | 699         | 696         | 494         |
| Lead covered cable                  | 235         | 259         | 203         | 359         | 395         |
| Optical fibre cable                 | 746         | 474         | 670         | 556         | 361         |
| Blown fibre cable                   | 138         | 204         | 285         | 239         | 112         |
| <b>Total</b>                        | <b>4434</b> | <b>3645</b> | <b>4626</b> | <b>4969</b> | <b>4066</b> |
| <b>Telephone exchange equipment</b> |             |             |             |             |             |
| Miscellaneous equipment             | 823         | 537         | 1906        | 2683        | 3179        |
| Micellaneous Metals                 | 1202        | 912         | 2082        | 3032        | 2477        |
| Payphone equipment                  | 223         | 38          | 218         | 768         | 114         |
| Telephones                          | 431         | 464         | 697         | 699         | 288         |
| <b>Total</b>                        | <b>2679</b> | <b>1952</b> | <b>4902</b> | <b>7181</b> | <b>6058</b> |
| <b>Office &amp; Packaging waste</b> |             |             |             |             |             |
| Office paper                        | 6264        | 1379        | 1277        | 912         | 817         |
| Cardboard                           | 1366        | 6288        | 5792        | 7454        | 6697        |
| Plastics                            | 14          | 34          | 0           | 0           | 0           |
| Toner cartridge                     | 50          | 16          | 13          | 12          | 12          |
| Silica desiccant                    | 10          | 5           | 4           | 4           | 0           |
| Aluminium cans                      | 2           | 14          | 10          | 12          | 11          |
| Plastic cups                        | 12          | 15          | 9           | 6           | 7           |
| <b>Total</b>                        | <b>7719</b> | <b>7751</b> | <b>7105</b> | <b>8398</b> | <b>7544</b> |
| <b>Batteries</b>                    |             |             |             |             |             |
| Ni-cad rechargeable batteries       | 16          | 34          | 27          | 26          | 18          |
| Exchanged lead acid batterie        | 2632        | 3408        | 3536        | 2378        | 1979        |
| Vehicle Lead Acid Batteries         | 61          | 35          | 37          | 61          | 59          |
| <b>Total</b>                        | <b>2708</b> | <b>3477</b> | <b>3601</b> | <b>2465</b> | <b>2056</b> |
| <b>Transport related waste</b>      |             |             |             |             |             |
| Lubricating oil                     | 246         | 241         | 256         | 259         | 208         |
| Oil filters                         | 90          | 71          | 86          | 46          | 30          |
| Antifreeze/water mixture            | 21          | 8           | 11          | 13          | 13          |
| Brake fluid                         | 1           | 1           | 1           | 1           | 2           |
| Mixed fuel                          | 3           | 2           | 4           | 46          | 27          |
| Oil contaminated waste              | 12          | 12          | 12          | 14          | 12          |
| Paint solvent/thinners              | 0           | 1           | 0           | 0           | 1           |
| Tyres                               | 404         | 485         | 438         | 547         | 615         |
| Accident Vehicles                   | 0           | 0           | 0           | 172         | 132         |
| <b>Total</b>                        | <b>777</b>  | <b>822</b>  | <b>808</b>  | <b>1097</b> | <b>1040</b> |
| <b>Misc Electrical Equipment</b>    | 823         | 1441        | 3377        | 3651        | 4309        |

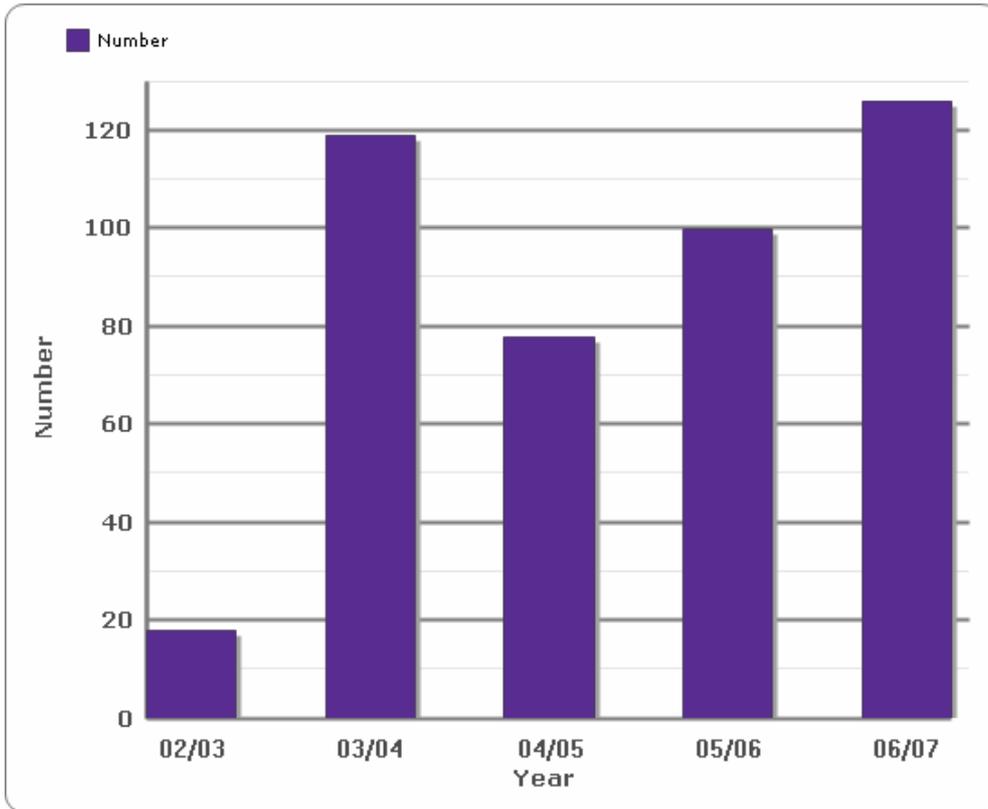
|  |               |               |               |               |              |
|--|---------------|---------------|---------------|---------------|--------------|
| <b>General Scrap Metal</b>             | 853           | 1411          | 4416          | 5244          | 5965         |
| <b>Telephone directories</b>           | 359           | 268           | 920           | 655           | 220          |
| <b>Telegraph Poles</b>                 | 6551          | 5103          | 6122          | 5689          | 5554         |
| <b>Computing Equipment</b>             | 443           | 755           | 1470          | 1292          | 1433         |
| <b>Clothing</b>                        | 3             | 2             | 0             | 0             | 0            |
| <b>Catering Oil</b>                    | 80            | 44            | 25            | 24            | 24           |
| <b>Other (eg wood, glass, etc)</b>     | 0             | 25            | 21            | 14            | 16           |
| <b>Catering Equipment</b>              | 0             | 19            | 15            | 22            | 0            |
| <b>Fluorescent Tubes</b>               | 0             | 0             | 11            | 47            | 32           |
| <b>Waste Oil</b>                       | 0             | 0             | 0             | 1592          | 1690         |
| <b>Total</b>                           | <b>9112</b>   | <b>9069</b>   | <b>16378</b>  | <b>18229</b>  | <b>19243</b> |
| <b>Total waste recycled</b>            | <b>27809</b>  | <b>27626</b>  | <b>37421</b>  | <b>42340</b>  | <b>40007</b> |
| <b>General Waste</b>                   | <b>89878</b>  | <b>79677</b>  | <b>73201</b>  | <b>59665</b>  | <b>54921</b> |
| <b>Total weight for all categories</b> | <b>117688</b> | <b>107303</b> | <b>110622</b> | <b>102005</b> | <b>94928</b> |

|   |                       |                       |                        |                        |                      |
|---|-----------------------|-----------------------|------------------------|------------------------|----------------------|
| <b>waste recycled (as % of total waste)</b> | <b>24%</b>            | <b>26%</b>            | <b>34%</b>             | <b>42%</b>             | <b>42%</b>           |
| <b>Total income</b>                         | <b>£4.26 million</b>  | <b>£3.9 million</b>   | <b>£2.9 million</b>    | <b>£3.23 million</b>   | <b>£4.48 million</b> |
| <b>Total expenditure</b>                    | <b>£8.29 million</b>  | <b>£9.9 million</b>   | <b>£7.4 million</b>    | <b>£7.97 million</b>   | <b>£5.15 million</b> |
| <b>Landfill tax savings</b>                 | <b>£0.36 million</b>  | <b>£0.38 million</b>  | <b>£0.54 million</b>   | <b>£0.76 million</b>   | <b>£0.84 million</b> |
| <b>Total savings/costs</b>                  | <b>- £3.7 million</b> | <b>- £5.6 million</b> | <b>- £3.96 million</b> | <b>- £3.98 million</b> | <b>£0.17 million</b> |

### Number of Environment assessment questionnaires (GS13) completed



## Number of Environment questionnaires (GS13) where continuous improvement was required



## 2007 International Data

|  | Electricity        | Renewable Electricity | Gas              | Oil               | Water             | Total Waste    | General Waste  | Waste Recycled | Travel               |                      |                     |                   |                  |                 |
|--|--------------------|-----------------------|------------------|-------------------|-------------------|----------------|----------------|----------------|----------------------|----------------------|---------------------|-------------------|------------------|-----------------|
|  | kWh                | kWh                   | kWh              | litres            | litres            |                | Tonnes         | Tonnes         | Tonnes               | Air miles short haul | Air miles long haul | Car miles Petrol  | Car miles Diesel | Hire Car Petrol |
| Spain  | 20,907,000         | 0                     | 0                | 2620 <sup>1</sup> | 38,573            | 28             | 15             | 14             | 500,000              | 250,000              | 560,000             | 140,000           | 0                | 0               |
| Switzerland <sup>1</sup>   | 59,104             | 0                     | 95,197           | 0                 | 514,000           | 4              | 4              | 0              | 0                    | 0                    | 110,000             | 0                 | 0                | 0               |
| Americas   | 39,968,328         | 0                     | 49,151           | 8,541             | 151,914           | 287            | 236            | 51             | 10,007,908           | 18,953,677           | 424,062             | 0                 | 2113             | 0               |
| Germany  | 71,623,068         | 0                     | 0                | 0                 | 334,000           | 358            | 341            | 17             | 3,658,677            | 1,829,338            | 0                   | 14,527,500        | 0                | 0               |
| Hong Kong  | 279,713            | 0                     | 0                | 0                 | 0                 | 0              | 0              | 0              | 1,038,295            | 2,279,659            | 0                   | 0                 | 0                | 0               |
| Taiwan   | 27,709             | 0                     | 0                | 0                 | 704,000           | 6              | 6              | 0              | 59,504               | 12,192               | 0                   | 0                 | 0                | 0               |
| Seoul  | 22,929             | 0                     | 0                | 0                 | 0                 | 0              | 0              | 0              | 65,546               | 296,027              | 0                   | 0                 | 0                | 0               |
| Tokyo  | 167,490            | 0                     | 0                | 0                 | 0                 | 0              | 0              | 0              | 434                  | 778,146              | 0                   | 0                 | 0                | 0               |
| Singapore  | 170,588            | 0                     | 0                | 0                 | 0                 | 3              | 0              | 3              | 112,132              | 2,810,482            | 0                   | 0                 | 0                | 0               |
| KL   | 35,828             | 0                     | 0                | 0                 | 0                 | 0              | 0              | 0              | 19,290               | 133,557              | 0                   | 0                 | 0                | 0               |
| Bangkok <sup>1</sup>   | 160,000            | 0                     | 0                | 0                 | 0                 | 2              | 2              | 0              | 0                    | 0                    | 0                   | 0                 | 0                | 0               |
| Sydney   | 494,720            | 0                     | 0                | 0                 | 0                 | 21             | 4              | 17             | 463,774              | 4,865,876            | 0                   | 0                 | 0                | 0               |
| Melbourne  | 75,272             | 0                     | 0                | 0                 | 0                 | 18             | 0              | 18             | Note 2               | Note 2               | 0                   | 0                 | 0                | 0               |
| Netherlands <sup>1</sup>   | 32,520,323         | 0                     | 504,961          | 5,000             | 8,950,000         | 79             | 79             | 0              | 0                    | 0                    | 0                   | 0                 | 0                | 0               |
| Ireland  | 35,648,271         | 0                     | 144,832          | 15,000            | 0                 | 378            | 290            | 88             | 0                    | 0                    | 0                   | 0                 | 0                | 0               |
| Belgium  | 7,340,710          | 0                     | 1,292,039        | 11,690            | 9,496,000         | 622,691        | 622,691        | 0              | 977,284              | 861,872              | 0                   | 9,622,500         | 9200             | 0               |
| Italy  | 50,310,696         | 18,574,411            | 261,381          | 0                 | 13,489,000        | 31             | 4              | 27             | 1800000 <sup>1</sup> | 650000 <sup>1</sup>  | 0                   | 52,405,418        | 84400            | 0               |
| Hungary  | 325,817            | 0                     | 0                | 0                 | 0                 | 0              | 0              | 0              | 215000 <sup>1</sup>  | 0                    | 534,560             | 46,530            | 5000             | 600             |
| Czech  | 40,546             | 0                     | 0                | 0                 | 483,000           | 0              | 0              | 0              | 893,010              | 0                    | 89,276              | 61,484            | 0                | 0               |
| France   | 1,591,348          | 0                     | 0                | 0                 | 0                 | 0              | 0              | 0              | 1,222,812            | 403,357              | 1,386,000           | 36,000            | 0                | 0               |
| <b>TOTALS</b>  | <b>261,769,460</b> | <b>18,574,411</b>     | <b>2,347,561</b> | <b>40,231</b>     | <b>34,160,487</b> | <b>623,907</b> | <b>623,672</b> | <b>235</b>     | <b>19,018,666</b>    | <b>33,474,183</b>    | <b>3,103,898</b>    | <b>76,839,432</b> | <b>100,713</b>   | <b>600</b>      |
| Note 1 - Estimated (based on last year)  |                    |                       |                  |                   |                   |                |                |                |                      |                      |                     |                   |                  |                 |
| Note 2 - Included in Sydney figure   |                    |                       |                  |                   |                   |                |                |                |                      |                      |                     |                   |                  |                 |
| Note 3 - Fuel used   |                    |                       |                  |                   |                   |                |                |                |                      |                      |                     |                   |                  |                 |
| Note 4 - Sample of country returns checked against table entries by LRQA but data not verified |                    |                       |                  |                   |                   |                |                |                |                      |                      |                     |                   |                  |                 |