



BT and the environment

Better World – Our Commitment to Society

BT and the environment

Global industries with far-reaching environmental impacts continue to come under pressure to be more eco-efficient. Although the environmental implications of Telecommunications activities may not at first glance be great, our sheer scale and reach nevertheless have a sizeable impact on the planet and its people.

BT has always taken its environmental responsibilities very seriously. We can't simply ignore the fact that the things we do can have a significant impact on the individuals and organisations we do business with, and on the world around us. We have a duty to manage that impact and report on it.

We have been reporting on our environmental performance since 1992. We do it because we believe that we have a responsibility to all those who have an interest in BT.

Our annual reports are an integral part of our environmental management system. Today, this system, which received ISO14001 certification in 1999, has reached a new level of maturity.

Our environmental management system

ISO 14001 is an international standard for the certification of environmental management systems. Three of the key requirements are summarised below:

- The organisation shall identify and assess the significance of the impact its activities can have on the environment. These impacts are described as environmental aspects.
- Objectives and targets designed to reduce the organisation's environmental impact shall be established and a programme for achieving these objectives and targets shall be in place.
- The company's environmental policy must contain a commitment to continuous improvement, prevention of pollution and a commitment to comply with relevant environmental legislation and regulations.

We recognise that in our day-to-day operations we inevitably impact on the environment in a number of ways and we wish to minimise the potentially harmful effects of such activity wherever and whenever possible.

ISO14001 certification helps keep us focused on reducing the environmental impact of our operations at a time of very significant business, organisational and cultural change for BT.

However, experience has shown us that good environmental management not only yields financial savings, but also leads to efficient business practice.

As part of our continuing drive for quality in all that we do, we developed a comprehensive policy statement. This establishes our targets in sustainable environmental improvement and enables them to be regularly measured and monitored.

In this way we contribute to the future well being of the environment.

We have undertaken to help every BT person understand and implement the relevant aspects of this policy in their day-to-day work through regular communication of the Group's environmental objectives, action plans and achievements.

BT's main impacts on the environment have been classified into nine key groups, which are independent of local organisation or location.

The nine elements are:

- environmental risk
- fuel, energy and water
- waste
- transport
- emissions to air
- procurement
- product stewardship
- local impacts
- benefits

The roles and responsibilities <http://www.btplc.com/Betterworld/Environment/Environmentalmanagementsystem/Rolesandresponsibilitieschart.htm> for implementing our environmental policy and management system are described in the Business Principles, CSR Governance section of the Better World site.

Our environmental policy (extract)

BT is committed to preventing pollution and minimising the impact of its operations on the environment by means of a programme of continuous improvement. In particular BT and its wholly owned subsidiaries will:

- Meet and, where appropriate, exceed all relevant legislative and other requirements; where no regulations exist we shall aim to set our own exacting standards.
- Seek to reduce consumption of materials in our operations, reuse rather than dispose of whenever possible, and promote recycling and the use of recycled materials.
- Design energy efficiency into new services, buildings and products and manage energy wisely in all operations.
- Reduce wherever practicable the level of harmful emissions.
- Market products that are safe to use, make efficient use of resources, and which can be reused, recycled or disposed of safely.
- Work with our suppliers to minimise the impact of their operations on the environment through a quality purchasing policy.
- Site our buildings, structures and operational plant so that we minimise visual, noise and other impacts on the local environment.
- Support through our community programme the promotion of environmental protection by relevant external groups and organisations.
- Include environmental issues in discussions with the BT unions and in BT training programmes; encourage all BT people to implement sound environmental practices.
- As a minimum, monitor progress and publish details of our environmental performance in our Social and Environment report on an annual basis.

Our full environmental policy can be found at:

<http://www.groupbt.com/commitment/environment/policy.htm>

Environmental prosecutions

We had no prosecutions during the period April 2001 to March 2002.

Environment KPIs

Since we began reporting in 1992, we have used an increasing number of absolute indicators to show the levels of our resource use. Last year, we also chose to include five new ‘key performance indicators’ (KPIs). These provide a better indication of efficiency trends in our most significant areas of impact and best demonstrate to our shareholders, consumers, investors and other stakeholders, that BT is an environmentally responsible business.

The five indicators are as follows:

- Energy and water

Energy and water are ‘core resource-based inputs’ of communication companies like BT, and proper management of them is a primary focus of any EMS. Two indicators – energy consumed per turnover and water use per turnover – were selected in this area, because they link energy and water management to our core business growth.

Our 2001/02 results show an increase in energy and water consumed per turnover. However, our overall energy consumption decreased by 1.14 per cent and our water consumption by 5.7 per cent. However, due to the sale of Yell and the demerger of BT Cellnet, our turnover also decreased and this has distorted the results this year. However, we will be able to provide valid comparisons again next year.

- Waste

Waste reduction, re-use and recycling are at the centre of the concepts behind sustainable development. One indicator – waste arising and management – was selected in this area, to indicate the effectiveness of our waste management programmes.

In 2001/02, our recycling totals increased to 21 per cent and the amount of waste we sent to landfill reduced by 22.5 per cent. These results clearly indicate the effectiveness of our new waste initiatives.

- Transport

Fuel is another core resource-based input of a communication company. Therefore, the effective management of finite resources must also be a primary focus of an EMS. One indicator – distance travelled per turnover – was selected in this area, because it links transport management to core business growth.

Once again, our 2001/02 results have been distorted due to the sale of Yell and the demerger of BT Cellnet. However, we will be able to provide valid comparisons again next year.

- Emissions

Effective protection of the environment requires the commitment of business to limit global warming and is one of the four objectives of sustainable development. We selected one important indicator in this area – emissions of CO₂ per £m turnover – because it links our core business growth to our air emissions.

Despite the reduction in turnover, our 2001/02 results show a significant drop in CO₂ emissions per turnover. This has been due to the purchase of 4.1 per cent (93GWh) of BT’s total electricity consumption from renewable sources – exceeding our 2002 target of 3 per cent – and securing the UK’s largest Combined Heat and Power (CHP) contract for the supply of 1.1 TWh of electricity.

The new CHP-based energy produces 40 per cent less CO₂ than conventional power stations and represents nearly 50 per cent of BT's energy use.

Taken together, these initiatives will deliver a reduction in our CO₂ emissions of 230,000 Tonnes.

More information:

- Better World: data and targets

Environmental Risk

As well as identifying day to day activities which have an impact on the environment, BT also has to be prepared for accidents and emergencies.

The events which pose the highest risk to the environment are those which are:

- likely or relatively likely to occur, and
- potentially serious if they do occur.

Fuel tanks

We have several thousand oil storage tanks, many of which are below ground. The oil is used for both for heating, and to supply stand-by diesel generators, which power the network in the event of electrical supply failure.

These tanks have been identified as the company's highest environmental risk. The sheer number of tanks means that there is a relatively high risk of either oil leakage, or spillage during oil deliveries. Either event would have serious environmental consequences.

Oil is the single largest contaminant of land and ground water. It poses a real threat to drinking water supplies – particularly in sensitive areas close to water abstraction points.

To reduce the likelihood and/or severity of oil pollution incidents, two pieces of legislation, the Groundwater Regulations 1998 and the Control of Pollution (Oil Storage) Regulations 2001, were recently enacted in the UK.

Fuel Tank Integrity

The testing, repair, and decommissioning of fuel tanks is a vital part of BT's programme to reduce the risk of pollution to ground water and land from the storage of diesel fuel.

Testing and remedial programme

Aims

Four years ago, we initiated an ambitious programme to test all our fuel tanks. A project control board – set up to manage a variety of issues relating to fuel tanks – highlighted the potential environmental impact of these tanks.

To date, we have spent £8.1million on the testing and remedial work programme and have substantially reduced the risk of pollution from our oil storage tanks.

Scope

A project team, led by our network power and cooling systems team, and supported by BT Property Partners, PSL Ltd. – an expert integrity testing company – has visited 4,792 sites, tested 5,262 tanks, passed 4,113 (78 per cent) and provided detailed recommendations for remedial action.

Action

Over 2,050 remedial jobs were identified, 521 of which resulted in the decommissioning of the existing tank and replacement with a new internal tank. The remainder required either pipe-work repairs or other minor works. The testing programme also identified a further 772 tanks which no longer pose a risk to the environment, either because they had already been concrete/foam/slurry filled, or because the tanks had previously been removed from site or the site had been sold.

To enable us to monitor the speed of our response when an integrity test reveals the need for major remedial work, we are introducing a measure to ensure that work is concluded within three months of the test date.

Incident reporting

Because of the sheer size of BT's operations, even with good controls, incidents occasionally happen. To reduce the number and severity of these incidents, it is important that they are investigated promptly, lessons are learnt and any changes are implemented quickly. BT classifies environmental incidents as:

- local, where a minor spillage is contained within a very small area
- significant, where the spillage 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
- serious, where the spillage has, or is likely to enter either the drainage system or topsoil.

For significant and serious incidents, the Facilities Management helpdesk is informed and a specialist contractor is contacted to clean up the spillage. For serious incidents, the Environment Agency (EA) or the Scottish Environment Protection Agency (SEPA) are also informed about the incident.

Investigation process

The BT Wholesale Power Technology Support team, which already investigates major power-related incidents, now investigates fuel-related serious environmental incidents. The team's investigative skills, technical understanding and legal/regulatory awareness are helping to improve our performance in this area.

A process has been established, and details of incidents recorded on a database. So far this year, the team has undertaken investigations into 13 incidents and made recommendations for improvement, where appropriate.

Site questionnaires

A comprehensive site questionnaire has been developed to improve our detailed understanding of the environmental risks associated with each of our facilities. It covers information such as drainage plans, the proximity of the fuel delivery points to drains, and whether the site has oil interceptors, that are regularly maintained.

By the end of September 2002, questionnaires were completed for all of BT's sites. The programme will now continue and the assessments will be reviewed as part of an annual cycle by BT's contracted Facilities Management supplier, Monteray.

Oil recovery

Since the beginning of the year, 263,433 litres of oil have been removed from tanks that have been decommissioned as a result of our integrity testing programme or our programme to convert to gas-fired heating systems.

Of this, 65,833 litres have been re-used for heating purposes at other BT sites. Where it has not been possible to re-use internally within BT, other external re-use options have been considered. Approximately 124,000 litres of recovered oil have been sent for reuse in the manufacture of road surface material. As a last resort, we disposed of 73,600 litres as controlled waste, so that the fuel tank decommissioning programme would not be delayed.

Remote monitoring

We are disappointed that the programme to install a remote oil management system, which would have enabled better management of our heating oil stocks, has had to be abandoned. We have been unable to overcome the difficulties associated with installing supplier-specific, remote stock monitoring equipment.

When it became clear that the incumbent supplier would not tender for the new oil supply contract, all expenditure on the programme ceased. The new oil supply arrangements involve a number of regional contractors. It had not been possible to negotiate a requirement for remote stock monitoring in these contracts.

More information:

- Better World: data and targets

Fuel, energy and water

This section of the report considers environmental aspects associated with the use of fuel, energy and water resources. It is primarily concerned with effective energy management, i.e. promotion of principles, practices and technologies to increase lighting, heating, ventilation, air-conditioning, utility, process and power systems efficiency.

Our main focus this year continued to be energy management and maintaining our ISO14001 certification. Our main concern has been to consolidate our strategy, given the many organisational changes that have taken place during the year – e.g. the sale of Yell, the de-merger of mmO2 and the sale of the BT estate to Telereal.

Throughout the year, we continued to invest in energy efficiency and in making energy efficiency part of our normal business process.

Our most significant achievement this year, has been the purchase of 4.6 per cent (93GWh) of BT's total electricity consumption in the UK from renewable sources – exceeding our 2002 target of 3 per cent – and securing the UK's largest Combined Heat and Power (CHP) contract for the supply of 1.6 TWh of electricity. Taken together, these initiatives will deliver a reduction in our CO2 emissions of 283,000 tonnes.

This year also saw the sale of majority of BT's property estate to Telereal Holdings Ltd. This means that Telereal are now the responsible property management agent and landlord for BT. Our energy management team is now working in partnership with Telereal to move forward with the delivery of our long-term programmes and efficiency improvements.

Energy consumption

We continuously monitor energy consumption throughout our operations, using one of the largest computer-based monitoring and targeting systems in the UK. This has been significantly expanded using half hour interval data at over 3,000 sites.

We have also invested in new electricity meters, which enable us to monitor consumption on a half-hourly basis, rather than on the monthly receipt of a bill. This helps us to identify wastage earlier.

Energy consumption for BT's network and estate during 2001/02 was 2,578 GWh. This is made up of 1,603 GWh electricity (approximately) for our network, 426 GWh electricity (approximately) for our premises and 549 GWh (gas and oil use) for our premises.

The approximate emissions from our use of energy can be seen in the data and targets section of this site.

Energy initiatives

- **New buildings:** BT opened three major new offices during 2001/02 at Oxford, Bristol and Sevenoaks. Energy efficiency and environmental performance were key objectives in the design of all three. Each site has a Building and Research Establishment Environmental Assessment Method (BREEAM) rating of “very good” or “excellent”. Each has its own energy targets.
- **Plant replacement:** Our partners in Telereal have continued to use a cradle-to-grave principle of whole-life cost to help us to reduce energy waste. Whole-life costing continues to deliver savings on our network Power and Cooling Investment Program, with refrigerant-based cooling units replaced by fresh-air based cooling – increasing plant efficiency and reducing the use of CFCs.

- Heating, ventilation and air conditioning (HVAC) investment program: We have continued to invest in economic efficiency improvements. Initiatives include:
 - the installation of liquid pressure amplification pumps in the air conditioning chillers of central refrigeration plants (LPA is a new technology designed to increase the efficiency of refrigeration systems by reducing flash gas). This initiative has delivered average savings of 32 per cent at ten key sites.
 - installation of inverter- based motor controls (SAVAWATT) on split air conditioning units continues, with more than 200 office and retail sites completed in 2000/01. In our initial tests, the average savings achieved were 30 per cent on single-phase air- conditioning equipment and 14 per cent on three-phase equipment.
- Energy awareness: We have continued to develop an in-house energy awareness programme, both through in-house publications, and an intranet guide to our ISO14001 certification and the conservation of energy and water. Workshops with our suppliers and contractors help them help us maximise our environmental performance.
- Energy benchmarking and surveys: A number of energy-related key performance indicators have been built in to the contract with Monteray, our building facilities supplier. The facilities management team continues to conduct energy surveys at poorly performing sites, with a view to minimising consumption of energy and water. Web-based electricity exception reports, using half-hour data, have helped our building facilities supplier to focus further on waste.
- Home working: BT also launched a home-working programme, which enables many of our people to travel less and allows us to close some of our older and less efficient office buildings.
- Contract and Supply strategy: We have implemented major changes in our contract and supply strategy, enabling us to develop longer-term relationships with our suppliers and our building and equipment maintainers, so that they can help us improve our energy performance.
- Eliminating waste: Energy targets help our business focus on eliminating waste. They cover the following areas:
 - Purchase of green/renewable energy
 - Process energy
 - Premises energy
 - In 2001/02, BT invested £1.2 million in its energy conservation programme. This has resulted in savings of almost £600k.

Renewable energy

We are committed to meeting and improving on the UK Governments sustainability targets for the purchase of renewable energy, and are working with our suppliers to increase capacity. This is proving very challenging for the UK, with capacity still at less than 3 per cent available from green sources.

Renewable energy has major environmental benefits compared to more conventional methods of electricity generation. These include:

- a reduction in atmospheric pollution which has a negative impact on human health, materials, crops, forests, freshwater fisheries and unmanaged ecosystems
- a reduction in greenhouse gas emissions
- a reduction in noise pollution and improvement in visual amenity.

A study we commissioned last year, carried out by AEA Technology for BT, clearly showed that the sustainability benefits outweigh the additional marginal costs of purchasing “green electricity” by as much as a factor of six.

Our target last year was to purchase three per cent of BT’s total electricity consumption in the UK from renewable/green sources by March 2002, subject to market availability.

During 2000/01 we managed to secure 55GWh of New Green Capacity feeding our low energy office buildings. A further green supply contract was secured feeding 90 per cent of BT payphones’ 38GWh.

In total, 4.6 per cent of BT’s total electricity consumption in the UK came from renewable sources.

In addition, in March 2002, BT secured the largest low CO₂ CCL – exempt Combined Heat and Power (CHP) – based electricity contract for the supply of 1.6 TWh of electricity. This represents nearly 50 per cent of BT’s energy use and includes all of BT’s major city centre telephone exchanges.

The new CHP based energy produces 40 per cent less CO₂ than conventional power stations and thus reduces BT’s CO₂ emissions significantly.

This, together with our other new green contracts, will deliver a reduction in our CO₂ emissions of 283,000 tonnes.

Premises energy

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

Energy usage within our premises has broadly stabilised with the continued refurbishment of our office and depots. The modern office requirement of air conditioning has increased energy usage slightly, as older buildings are refurbished to the new standard.

Energy consumption and heating energy were down by 5.8 per cent and 13 per cent respectively, from 2001/2002. Degree-day corrected heating consumption reduced by some 7,748 KWh per degree-day with the average degree-days for 2000/01 10 per cent lower than the previous year.

The balance of oil to gas continues to change in favour of gas as a result of our plant replacement programme. This is clearly shown by the large fall in oil use.

Process energy

Process energy includes all the electricity to power more than 6,300 radio stations, satellite earth stations and telephone exchanges that support our voice, data and IP networks.

We have invested extensively in our networks in order to meet the strong growth in demand for new telephony services and second lines, together with the massive demand for mobile and Internet services. In particular, investment continues in new broadband networks, upgraded SDH transmission systems, IP-based switching centres and the rollout of ADSL to our customers.

We anticipate the increase in network demand to be in excess of 250GWh in 2002/03.

The aim of our new process energy target is to build up on previous energy efficiency work and deliver a specific reduction program during 2002/03. This will continue to increase the efficiency our communications and data systems while allowing for the growth in demand and system size.

Water

Water is principally used in the BT estate for catering and hygiene purposes. A concerted effort has been made to reduce our water consumption by increasing investment in leak detection, underground pipe replacement and water-saving devices. As a result, we have reduced our water consumption by 5.7 per cent, from 2.27 million cubic metres in 2000/01 to 2.14 million cubic metres in 2001/2002

99 per cent of water consumption in the BT estate is consumed and measured at metered sites.

More information:

- Better World: data and targets

See Also:

- <http://www.doingyourbit.org.uk>

Waste

The production and correct disposal of waste from our operations are key environmental issues for BT. We produced more than 90,000 tonnes of waste in 2001/02; to maintain our ISO14001 certification, it is essential that we have efficient, effective and environmentally friendly waste management systems

Despite the variety of changes that have taken place in BT over the last few years, waste management for the whole of the company remains under the control of one single Waste Aspect owner. This ensures waste management across all BT lines of business is carried out to a uniform high standard.

BT has broken down the types of waste it generates into three distinct categories:

- Category 1 – waste that does not present a danger of environmental pollution.
- Category 2 – waste that is not toxic or hazardous in unmodified form, but which has the potential to become so if not treated properly on disposal.
- Category 3 – waste that is inherently toxic or hazardous and requires the most careful handling at all stages of the disposal process.

Detailed instructions on how to deal with these three categories of waste are set out in the BT Waste Guide document, available to all BT people.

BT's waste produce has been broken down into 64 sub-aspects, each with an environmental significance rating and an 'owner'. The Waste Aspect Owner has overall responsibility for the sub-aspects.

The BT Waste Forum

The BT Waste Forum is chaired by BT's Waste Aspect Owner, and meets every two months. Members come from across the Group, including Property Partners Informed Client Unit (ICU), Procurement and Supply Chain, BT Fleet, BT Wholesale, BT Environment Unit and Group Legal Services.

The role of the forum is to:

- set and monitor waste environmental targets
- review contractors' environmental performance
- ensure BT complies with all environmental legislation
- manage BT's packaging obligations
- promote and communicate environmental initiatives
- consider any new environmental ideas.

The forum's considerable environmental expertise is used by BT's Waste Aspect Owner to increase environmental awareness and promote our "3R" culture of reduce, re-use and recycle.

Waste Targets 2001-2002

During the period April 2001 to March 2002, BT met its five environmental improvement targets for waste, including its existing target for reducing waste to landfill, which had previously been delayed. For full details of BT's performance against these targets, please see the data and targets section of the Better World site.

BT's Waste Aspect Owner is also responsible for a number of targets in other environmental impact areas, where there is Facilities Management involvement. These are:

- By March 2003, BT will phase out all Halon portable fire extinguishers in advance of anticipated legislation.
- By March 2003, BT will phase out all Halon fixed automatic flood systems in advance of anticipated legislation.
- By March 2003, BT will identify the total volume of used estate cooling plant (excluding networks).
- By March 2003, BT will complete environmental risk questionnaires for 90 per cent of all sites.

For interim updates on our performance against these targets please see the data and targets section of the Better World site.

In 2000/01, the transition of our facilities management activities to the external consortium, who now manage the facilities activities at all of our 7,4000 sites, meant we had some disappointing results. However, the working relationship is now working well and we have had some very good results year for the year ending March 2002. For example, we reduced the amount of waste we sent to landfill by 22.5 per cent and we increased the amount of waste recycled to 21 per cent.

In addition, a major new initiative introduced this year, i.e. Materials Recycling Facilities (MRFs), has helped us to significantly increase the amount of waste recycled for our some of our other targeted waste streams. For example, battery recycling increased by 150 per cent and cardboard recycling increased by 114 per cent. We also managed to recover 832 tonnes of PC equipment for recycling.

You can check how we performed against all our targets in the Data and targets section of this report.

Outsourcing facilities management

In one of the biggest property deals ever seen, BT sold the vast majority of its estate in the year 2001/02. However, we still retain responsibility for the environmental impact of our activities.

Maintenance of the whole estate has been outsourced. A key factor in choosing our contract partner, Monteray, was their ability to work to the same high environmental standards that we set ourselves.

Structure

Monteray have divided the country into eight different areas called Regional Service Providers (RSPs). There is also a Monteray headquarters national unit called the Enabling Organisation (EO). Each of the RSPs and the EO has appointed dedicated Health & Safety and Environmental Managers, responsible for ensuring that Monteray maintain BT's environmental expectations. This applies in particular to ISO14001 requirements to manage and control our aspects of waste, fuel energy & water, environmental risk, emissions to air and local impacts.

Liaison

BT maintains a small, in-house organisation called the 'Informed Client Unit' (ICU) to manage the Monteray contract and liaise with the RSPs and EO to improve environmental performance. Representatives from the Informed Client Unit attend monthly meetings of the Monteray Environmental managers.

Significant improvements have taken place throughout the year. For example, the Monteray monthly environmental performance report, circulated to the Environmental Policy Implementation Committee members for information, now includes new data systems and analysis.

Recycling

BT continues to promote a wide variety of recycling initiatives. Recycling is not only good environmental practice; it makes economic sense by reducing our landfill costs, and in some cases earning revenue.

Here are figures for some of our recycling schemes:

Quantities recycled 2001/02

Cable	5,755.67 tonnes
General office recycling	4,104.40 tonnes
Telegraph poles	3,925.90 tonnes
Metal	1,856.41 tonnes
Telephone exchange equipment	2,700.10 tonnes
Computing equipment	832.00 tonnes
Telephone directories	616.40 tonnes
Batteries	20.30 tonnes
Clothing	3.10 tonnes

In addition BT disposed of 12,704.5 tonnes of waste from manhole pump-outs, and recovered 1,500 trim phone dials.

New initiatives

A major new initiative introduced into the BT Waste Management process this year was the gradual roll out of some Materials Recycling Facilities (MRFs) as part of the waste contracts.

At an MRF site, general waste is sorted at a waste station before being sent to landfill. Any items, which can be recycled (such as cardboard, metals, uncontaminated plastics etc) are taken out and only the remainder goes to landfill. BT has actively supported the introduction of such activities for our waste contracts. MRFs are now working at a number of sites across the country and will expand further.

The MRFs have already had an effect on BT's figures this year for landfill and cardboard. The Informed Client Unit will be working with Monteray next year to extend the process to include wider geographical locations and perhaps more items such as paper.

More information:

- Better World: data and targets

Transport

BT Fleet manages BT's commercial and company car fleets. The scale of the BT fleet business makes it a major organisation in the transport industry, exercising considerable purchasing power to ensure BT achieve the best possible value for money and lowest whole-life costs.

To minimise environmental impact, BT Fleet provide a complete cradle-to-grave fleet management service, including vehicle specification, procurement, fleet administration, cost control and driver support, maintenance, testing and repair, and vehicle resale (via BT Fleet's dedicated sales organisation).

Our operational fleet of 37,509 vehicles, one of the largest in the UK, is now predominately diesel-fuelled. Over the past five years, the size of our fleet has reduced by 4 per cent and fuel consumption has reduced by 13 per cent.

Earlier this year, BT Fleet invited potential investors to help develop the business and take advantage of potential growth in the commercial vehicle sector. In June BT Fleet became a wholly owned subsidiary within BT Group. These moves are central to our strategy to develop and grow the business to both meet BT's future transport needs and address opportunities in the external vehicle market.

The BT Group has committed to a five-year exclusive contract with BT Fleet.

BT have been managing and reporting on the impact of the vehicle fleet on the environment since 1992 and where appropriate, these responsibilities will be carried over to the new business.

Commercial vehicle fleet

Our operational fleet of 37,509 vehicles, one of the largest in the UK, is now predominately diesel-fuelled. Over the past five years, the size of our fleet has reduced by 4 per cent and fuel consumption has reduced by 13 per cent.

Full details are available in the data and targets section of the Better World site.

These reductions have been influenced by a number of initiatives and policies:

- Engineering productivity targets that aim to eliminate unnecessary travel, supported by a number of laptop applications, such as route maps to help engineers get to their locations by the shortest route.
- Operational policies such as efficient vehicle utilisation and optimising replacement cycles
- Environmental awareness programmes to help drivers reduce their fuel consumption.

This year we are reporting an increase in mileage for the commercial fleet due to our efforts to continually assess the accuracy of our data collection processes. This has no bearing on the downward trend in fleet mileage in recent years or the accuracy of the fuel used that has continued to reduce year on year.

Our whole-life cost vehicle purchasing model takes account of all operational information, including anticipated fuel costs, as well as predicting the optimum replacement cycles for individual models.

This has significantly reduced the lives of BT vehicles – ensuring the current fleet benefits from latest technologies and emission standards, while delivering greater operational reliability and lower maintenance frequency and costs.

BT's vehicle fleet was named UK Fleet of the Year at the 2001 Fleet News Awards. It was also a finalist in the Fleet Environmental Award.

Company car policy

The Government's objectives in introducing emissions-based company car taxation were twofold:

- to reduce total mileage and consequential pollution,
- to encourage drivers into lower-emission, and therefore more ecologically friendly, cars.

The new BT company car scheme, launched in April 2001, includes the following environmental benefits:

- we have increased the allowance paid to employees who are entitled to a company car but choose not to take it by roughly 30 per cent. This will encourage more employees not to take a company car and reduce total mileage.
- the specification of lower emission, more tax-efficient cars for ‘business need’ cars (cars that are not offered as a perk) will reduce emissions
- ongoing communications to BT company car drivers ensure that everyone who is entitled to a company car is aware of the impact of their choice on their tax bill and the relative tax-efficiency of lower-emission cars – encouraging them to opt for lower-emission cars.

Discouraging fuel consumption

As car users will no longer be chasing mileage thresholds in order to benefit from the tax breaks in the current regime, we anticipate that our overall mileage will reduce. We also now reimburse our people for business travel according to their grade and not, as was previously the case, according to car engine size – in other words, we will no longer finance “gas guzzlers”.

We have in place a “penalty” for those who still choose “gas guzzlers”. Cars that fall in Fuel Category A, those that return less than 23 miles per gallon, are subject to a £20 per month surcharge on their users’ hire charge.

Online ordering

Company Car Ordering is now completely web-based. The web has links to all the vehicle manufacturers as well as to the Vehicle Certification Agency (VAC) website where all new vehicle Fuel Consumption and CO2 Emission data can be viewed, allowing for a fully informed new car choice to be made and supporting the government’s aim of encouraging the selection of lower-emission cars.

Information to assist drivers to minimise the environmental impact of their cars is also included on the site.

Alternative fuels

Our approach to alternative fuelled vehicles (LPG/CNG) for the commercial fleet remains unchanged. The fleet consists predominantly of medium and large vans – nearly all diesel-powered.

The only practical alternative for these vehicles would be a dual fuel option, because of the limited availability of LPG fuel. However, this would mean phasing in new vehicles, since it is not possible to convert diesel engines to run on LPG.

Furthermore, because our vehicles run at near maximum payloads, the additional space and loading specification required to store the LPG tanks would mean replacing existing vehicles with larger, less fuel-efficient vehicle types, in order to meet our operational requirements. Equally, replacing diesel vehicles with petrol would further reduce fuel economy, as petrol vehicles are inherently less efficient than diesel equivalents.

We are, however, evaluating a new product with the vehicle manufacturer, which has potential for BTs large vehicle heavy engineering fleet. This regulates LPG into the inlet manifold of diesel engine vehicles and effectively reduces the amount of diesel fuel used. Independent tests have confirmed improvements of between 5 and 18 per cent fuel economy, 20 per cent more power and up to 20 per cent more torque. The trial of the device has been postponed because the vehicle manufacturer has changed the engine design, so the compatibility of the LPG device will need to be retested.

Fuel Economy

For the second year in succession BT fleet entered the Vehicle Technical Trials at MIRA Test Track, organised jointly by Institute of Road Transport Engineers (IRTE) and Brewery Transport Advisory Committee (BTAC).

The two-day event, which is funded by the DETR under its Energy Efficiency Best Practice Programme, allows for accurate fuel tests to be carried out under controlled conditions. BT has been instrumental in the development of trials for the light commercial vehicles.

In June last year BT Fleet carried out back-to-back fuel consumption trials using actual “in-service” BT vans; “old” style Transits against “new” Transit models. The previous year we concentrated on BTs Logistics Fleet by testing and benchmarking a Euro-3 Motive Unit and Tri-Axle Semi-Trailer combination.

These trials are purely voluntary, and allow BT Fleet to test the effect of new vehicle models and/or after market enhancements on the fuel efficiency of our fleet.

Fuel Efficiency Devices

BT fleet has recently been evaluating a fuel economy device against the manufacturer’s claim of an average increase in fuel effectiveness by 20 per cent per cent and emissions reduction of 50 per cent.

The device has been fitted to six Transits vans for three months. Results indicate that fuel consumption improved by an average five per cent and exhaust emissions reduced by an average 36 per cent. To verify the results, the six vehicles are now being run without the device.

The analysis of the data and final report concluded average fuel savings of 12.49% and emissions reductions (smoke) of 36.42%. Further tests involving the new generation Transit have been conducted at Vauxhall’s proving ground at Millbrook. The results from the Millbrook tests and the next steps are being considered.

Noise Suppression

BTs fleet of specialist cabling vehicles are designed with in built facilities such as winches, compressors, electrical generation equipment and systems to work in cable ducts. Effectively this means that the vehicles operate for significant periods with the engine running and Power Take Off (PTO) engaged. This has the potential to affect the environment around the working area.

We have worked hard to develop specifications that minimise noise for the operators and those in the vicinity of the vehicles. We have over the years developed the vehicle specifications to include higher horsepower engines (allowing operation at lower engine revs.), sound deadening panels at the rear of the engine, and revised hydraulic valve component to reduce noise.

Despite increased power demands, we have reduced “noise at the operator's ear” from 90dbA to 85dbA, which means that our operators do not have to use of ear defenders– which would be a potential safety hazard as they work in and around normal road traffic and need to be fully aware of approaching vehicles.

We also specify that all vehicles fitted with hydraulic systems have the ability to either return to tick over when not powering the system, or have power-on-demand/stop and restart facility at the operating position, all of which have the benefits of reducing fuel usage, keeping operating noise to a minimum and reducing exhaust fumes.

Electric vehicle trial

BT is taking part in the TH!NK@bout London mobility project launched by motor manufacturer Ford. This project helps businesses and environmental groups in London join forces with local, regional and central government to introduce electric vehicles to the city's streets.

In August 2001, London Mayor Ken Livingstone presented BT Fleet with the keys to a brand new electric vehicle for the company to use around the capital.

For a year and a half, BT is replacing one of its Ford Fiesta vans with a silent zero-emission electric car provided by TH!NK @bout London. It will be used for light delivery work and site visits with a network planning team in and around the capital.

More than 50 organisations applied to take part in the scheme. BT was one of 15 chosen to participate as we were considered an environmentally aware, high quality and innovative organisation that reflects the diversity of transport users in London.

Other companies piloting TH!NK @bout London vehicles include the BBC, Sainsbury's and the Body Shop.

The Th!nk electric car is still being rigorously tested around the streets of London on a daily basis. Many advantages are being recorded, along with many learning points for any future production of such vehicles.

Better World:

- Data and targets

See Also:

- http://www.thinkaboutlondon.co.uk/default_ns.html

Emissions to air

In environmental terms, ‘emissions to air’ refers to the release of gases into the atmosphere. It is an environmental aspect that is particularly highly regulated.

At BT we monitor the emissions to air of a number of substances that impact adversely on the environment and contribute to ozone depletion and global warming. The most significant of these are emissions from the use of fuel, and losses of refrigeration and fire-suppressant gases.

For the past three years, BT has been reporting on its impact on climate change in accordance with the Department of the Environment, Transport and the Regions (DETR) Guidelines for Company Reporting on Greenhouse Gas Emissions i.e. equivalent tonnes of CO₂. This shows that:

- since 1991 we have achieved a 63 per cent reduction in CO₂ emissions due to the energy programmes we have introduced.
- since 1992 we have achieved a 27 per cent reduction in CO₂ emissions due to the transport programmes we have introduced.

This is equivalent to an annual saving of almost 1.2 million tonnes of CO₂.

For further details see the Data and targets section of the Better World site (CO₂ Model and CO₂ equivalent emissions chart).

We also report on our ozone-depleting substance emissions (as defined by the Montreal protocol) in accordance with the requirements of the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines – i.e. equivalent tonnes of CFC-11. For further details see the Data and targets section of the Better World site (CFC-11 equivalent emissions chart).

Refrigerants

BT uses refrigeration to cool air in our offices and operational buildings.

In most of our telephone exchanges, fresh air is used as the primary cooling medium.

This is achieved by ensuring that as far as possible communication equipment purchased is compliant with the requirements of the European Telecommunications Standards Institute.

This enables BT to make full use of fresh air-cooling – with its inherently lower energy and maintenance costs – for about 70 per cent of the year.

When, as a result of high outside air temperatures, unacceptable internal environmental conditions are detected, the refrigeration unit within the modular cooling unit will operate to cool the environment and meet the requirements of the equipment specification.

All cooling units purchased since February 2000, (approximately 2,000 have been delivered and installed into the operational estate) use ozone-friendly, chlorine-free refrigerant R407C, and hermetically sealed refrigeration units.

Modular cooling units are fitted with pressure transducers, a new control system, and are designed to be operated without the need for refrigerant analyser gauges. This prevents the accidental release of refrigerant gas and the accidental introduction of contaminants, a cause of system failure.

At five large London sites, a programme is in place to refurbish and replace large centralised chilling plants that use CFC ozone depleting refrigerant R11. Refurbishment of three of the sites was completed by March 2002 and the fourth site was completed in July 2002. The remaining site is being left in operation until building closure in 20053.

BT continues to monitor available refrigerants that comply with the requirements of the Ozone Depleting Substances Regulations 2037/2000 and, where possible, will use HFC refrigerants in new and existing plant.

We also continue to explore opportunities to improve the energy/cooling efficiency of the equipment we purchase.

Through our active participation in the European Telecommunications Standards Institute, we are influencing the design of future communication equipment to ensure that standard cooling practices can be applied.

And BT and Marconi are jointly submitting to ETSI a proposal that is intended to aid a harmonised cooling approach in the interests of energy/cooling efficiency and the free movement of goods into Europe.

We are also participating in a research project with the Buildings Services Research and Information Association (BSRIA) on the “Integrated Design of IT Communications Rooms”.

This will look at the different options of air flow management for optimum cooling: raised modular floors, ventilated ceilings, ducted distribution and “free blow” installations and alternative methods of cooling – fresh air, refrigeration cooling and chilled water.

The end result will be an agreed industry standard.

Action on climate change

BT has been reporting on its greenhouse gas emissions since the publication of the Department of the Environment, Transport and the Regions (DETR) ‘Guidelines for Company Reporting on Greenhouse Gas Emissions’.

Both energy management and fleet management are firmly embedded in our management systems and we have been monitoring our energy and fleet-related CO2 reductions over the last few years.

- since 1991 we have achieved a 63 per cent reduction in CO2 emissions due to the energy programmes we have introduced.
- since 1992 we have achieved a 27 per cent reduction in CO2 emissions due to the transport programmes we have introduced.

This is equivalent to an annual saving of almost 1.2 million tonnes of CO2.

Our emissions savings already exceed the UK Governments ‘self imposed’ target – which in itself goes beyond the Kyoto Protocol target of 12.5 per cent and is intended to achieve a reduction of 20 per cent in greenhouse gas emissions (from a 1990 baseline) by the year 2010.

For further details see the Data and targets section of the Better World site

Procurement & the Environment

BT spent £9.8 billion pounds this year on products and services, ranging from telephone exchange equipment and vehicles to accommodation, fuel and energy, stationery, office machinery and postal services (excluding the spend of BT former mobile operator BT Wireless, now known as mm02).

This makes us one of the UK’s largest purchasers, with an environmental influence that extends well beyond that of our own staff and workplaces. In recognition of this fact, for ISO 14001 certification, BT identified ‘Procurement’ as one of nine company activities that have an impact on the environment (an “environmental aspect”).

Procurement's Environmental Objective 02/03:

BT has reviewed Procurement's environmental objective in 2002. The outcome of this review is as follows:

We will continue to seek to influence our suppliers and contractors through our purchasing policy concerning the environment., However, we now have specific objectives to ensure appropriate supplier environmental data is collected and, following evaluation of our suppliers Environmental Impacts, to encourage improvement of poor performers in significant risk areas.

We are therefore adopting a risk-based approach – focusing attention on encouraging environmental improvements where the greatest impact can be made.

Links

- Achievements to Date
- Case Studies
- Next Steps
- Objectives and Targets

Progress to Date

Since 1992 BT has aimed to influence the environmental performance of many of our suppliers through the use of a supplier environmental questionnaire (GS13). This year, we have undergone a comprehensive review of this process and have created a new two- pronged process for managing environmental issues with our suppliers. Utilising technology to ensure central collection of data and minimal resources required, we have developed two questionnaires to enable us to identify risk and take appropriate action where required:

- Product Stewardship Questionnaire (GS19). This takes account of environmental issues relating to products supplied to BT. In particular, it addresses the issues covered by the WEEE (Waste, Electrical and Electronic Equipment) Directive. Responses are taken account of at the tender stage.
- Environmental Impact Questionnaire (GS13). This takes account of a supplier's overall policies and procedures for managing environmental issues. With a commitment to working towards continuous improvement, if required, given at tender stage, this questionnaire is completed post contract award and enables BT to identify and to drive continuous improvement in significant risk areas where required.

The new process, having successfully undergone a trial and been approved by external auditors, will be launched in November 2002. Prior to this, BT buyers have been attending training seminars to ensure they understand their responsibilities under the new process.

Recognition of Suppliers Excellent Environmental Performance

Through the BT Investor in Excellence awards, which recognise best practice among our suppliers, we are also continuing to reinforce the message to our suppliers that their environmental improvements are important to us.

Case Studies

Optic Fibre Cable – Pirelli

Last year's winner of the Investing in Excellence Awards (Commitment to Social Responsibility category) was Pirelli. Their entry related to Project Action, a collaborative project with BT that re-evaluated approaches to the installation of fibre cable, with the aim of reducing both environmental impacts and operational costs. Within this partnership, this company responded to their business responsibilities and to their social responsibilities.

The new methods that this company designed for installation of fibre cables – a process of blowing, rather than pulling cable through duct – has reduced the reliance on environmentally unfriendly or scarce materials. This included copper (80% reduction), and even eliminating the use of some elements – namely aluminium tape and solvents used in dyeing fibres.

The new design has seen substantial reductions in the supply chain, which, in turn, has reduced the use of energy, storage and transport. The sheath used in the new design is 100% recyclable. Pirelli's generally excellent recycling policy has seen a significant reduction in the use of other materials involved in the process, as well as a drop in BT's disposal requirement in fibre development.

There has been international external recognition of the environmental achievements of BT and Pirelli. The International Wire and Cable Symposium held in Colorado in November 2002 accepted a joint paper entitled 'Advances in Blown Cable Technology' and a paper was also presented in September 2001 Plastics in Telecoms conference.

The new design has also seen annual cost savings of over £7 million on fibre cable acquisition and subsequent installation.

Radio Towers – RJC (UK) Ltd.

BT owns approximately 300 core radio towers throughout the UK which, as part of routine maintenance, are periodically repainted by contractors or direct labour. In the past, solvent-based paints have been used, resulting in high levels of volatile organic compounds (VOCs) being emitted into the atmosphere.

In 2001, RJC (UK) Ltd were a shortlisted entrant at the BT Investing in Excellence Award for their work on reducing the emission of VOCs into the atmosphere. They achieved this through the use of water-based paints – the first time such paints have been used extensively on our towers. In 2000/2001 an estimated 19,000 litres of water-based paint were used compared to only 12,120 litres of solvent-based paint – a saving of 6,259 kg VOCs emitted. Ways to enable further improvements are being explored.

Product stewardship

Our linked-up world runs on electronic products. The drive to make better, faster, cheaper products can be good for customers and good for business, but it also creates waste.

'Product stewardship' is a set of principles designed to reduce the environmental impact of a product throughout its life cycle. Because it focuses on the design stage, when critical decisions affecting the product's future performance are made, product stewardship plays an important part in sustainability.

BT is a major buyer and user of electronic equipment, and as such we are subject to new or pending legislation designed to encourage sustainability in industry. We strongly support this move; but, rather than implementing the minimum measures necessary to comply with the law, we have created a new company Standard based on Product Stewardship principles, to help us select products.

In this section we report on the legislative and business drivers of Product Stewardship in BT, and on our own initiatives in this area.

More information:

- Better World:
- Data and targets
- Sustainability

Guiding principles

Legislation

BT's Product Stewardship team advises the company on the impact of specific pieces of impending legislation.

Chief among these are two pending European Directives awaiting final approval:

- Waste Electrical and Electronic Equipment
- Restriction on the use of certain Hazardous Substances in electrical and electronic equipment (RoHS).

Both aim to minimise the use of hazardous materials in electrical and electronic equipment, to minimise the amount of hazardous waste going to landfill, and to encourage reuse of materials. We welcome this ground-breaking legislation because it supports our desire for sustainability.

By working with industry bodies, such as the Industry Council for Electronic Equipment Recycling (ICER), and government departments, BT continues to make a positive contribution to legislative developments.

More information:

ICER <http://www.icer.org.uk/>

DTI legislation <http://www.dti.gov.uk/support/summary/htm>

Business drivers

Product Stewardship also contributes towards a better business:

- Taking back products at the end of their useful life will enable BT to refurbish and reuse more of its products, thus reducing landfill and increasing revenue.
- co -design of products will reduce the manufacturing, use and recycling costs.
- The RoHS Directive will assist BT in reducing its environmental impact on society.

BT is researching a number of alternative materials such as lead-free solder, substitutes for polymer additives like brominated flame retardants, and other stabilisers and pigments found in electrical and electronic equipment.

Initiatives

These are the steps we are taking beyond what is legally required of us to embed the principles of Product Stewardship into our working lives.

Product Stewardship Standard

This new Standard is an integral part of BT's buying process. It is designed to be used by suppliers to minimise the environmental impact of their products and operations. Its gathering function, which meets the WEEE and RoHS Directives, will also help us make better purchasing decisions.

We are trialling our new Standard prior to launch at the end of 2002.

Support to Broadband roll-out – The Access for Cornwall through Telecommunications to New Opportunities World-Wide (ACTNOW) Project

ACTNOW is a partnership comprising Cornwall Enterprise, BT, The South West Regional Development Agency, Business Link and Cornwall College. The partnership was formed to bring ADSL to Cornwall and is supported via EU Objective One funding. It is a mandatory requirement that all such EU projects include an environmental assessment as part of the project.

Our unique Rapid Life Cycle Assessment tool (RLCA©) is being used in support of the ACTNOW project as part of its Environmental Impact Assessment. This work will assess the hardware being supplied to local businesses to ensure that the maximum environmental benefit is achieved.

e-Living Project

BT is helping co-ordinate the European Union's "e-living – Life in a Digital Europe" project. The project's nine partners are evaluating, among other things, the direct environmental impact of the use of Information Communication Technologies (ICT) equipment.

We are taking part in setting and analysing the responses from the surveys within the project that concern Product Stewardship – particularly on the impact of the WEEE and RoHS Directives. For further information please click on the link below.

Product design assessment

We have assessed the eco-design of 18 products that are supplied to BT. The general findings can be summarised as:

- Products need to be designed with disassembly in mind.
- Use of mixed plastics should be avoided.
- Alternatives to adhesive labels should be used to avoid contamination of plastic materials.
- Identification marking of plastic components would aid recycling.

Raising awareness

Since the launch of the Product Stewardship training programme within BT, over 2,000 people have completed our Computer-Based Training package.

The programme aims to:

- raise awareness of environmental issues
- help employees appreciate the financial benefits of adopting good environmental practice.

Our campaign to promote Product Stewardship throughout BT continues with the planning of a series of roadshows at key locations and the publication of a quarterly newsletter.

Better World:

- Data and targets

See Also:

- http://europa.eu.int/comm/environment/legis_en.htm
- <http://www.icer.org.uk/>
- <http://www.dti.gov.uk/support/summary/htm>
- <Http://www.eurescom.de/e-living/index.htm>

Local impacts

BT's commitment to the wider environment is well known, but we also recognise that our products, services and operations affect our customers' immediate surroundings too. Disturbance to the local environment can take a number of forms, whether it's the visual intrusion of telephone wires, or disruption caused by construction work.

BT's approach to 'local impact' is embedded in our network planning rules and procurement policies. We have recognised channels enabling customers to communicate with us on these issues.

The infrastructure

BT provides communication services the length and breadth of the UK, from the most densely populated cities to the remotest Scottish islands.

The infrastructure needed to support our 28 million customer lines includes around four million telegraph poles, millions of manhole covers, thousands of roadside cabinets, 24 tunnels running through cities and hundreds of radio stations.

We are conscious that infrastructure on this scale has a potential impact on the environment – on the countryside, on skylines and cityscapes – that is of concern to all our stakeholders of interest.

This is why we support the UK Government’s sustainable development agenda, which has four key elements:

- social progress which recognises the needs of everyone
- effective protection of the environment
- prudent use of natural resources
- maintenance of high and stable levels of economic growth and employment.

Visual amenity

What do we mean by ‘visual amenity’? BT proposed the following definition, in response to the DETR consultation on telecommunications development:

‘the preservation of a view or prospect available to a member of the local community from a public location which is designated as protected’.

But when it comes to putting this into practice, it can be difficult to strike the right balance.

For example, replacing overhead wires with buried underground cable has both positive and negative environmental impacts.

- Underground cables may have less visual impact, but burying wires underground consumes much more energy and material resources.
- Poles are made from timber grown in managed forests and can be regarded as a renewable resource; underground installation requires plastic ducting, concrete and metal manhole covers, which are made from non-renewable sources.

Recognising that there is no “one size fits all” solution for all situations, we work with our customers to try to achieve a balance between visual impact, cost and resource use.

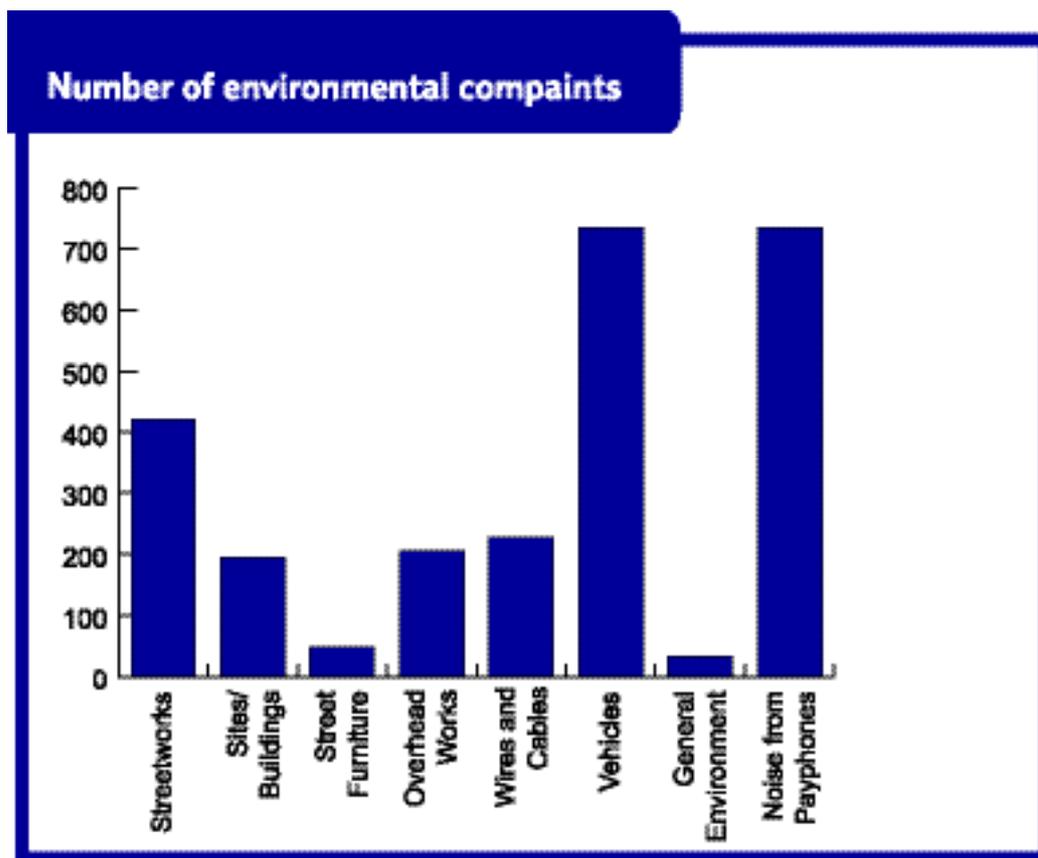
Street furniture

Our roadside cabinets are sometimes vandalised by fly posters and graffiti. This year has seen increased activity by local authorities to improve streetscapes. BT is seeking the most suitable and commercially viable solution to deal with this issue.

Environmental complaints

Having developed a methodology for collecting environmental complaints last year, the first full year’s data has now been collated. We continue to collect data to understand emerging trends and issues.

Improvements in the data capture process throughout the year have resulted in an increase in the monthly number of environmental complaints recorded.



However, the number of environmental complaints received represents less than one per cent of the total complaints that BT receives.

Street works

BT works closely with developers of housing estates to minimise the impact of construction activities when extending our network. Our agreement with the House Builders Federation ensures a co-ordinated on-site approach by all service providers.

The disruption caused by digging in the street is of concern to our stakeholders. BT has been involved in the consultation undertaken by the DETR regarding the New Roads and Street Works Act 1991: specifically Section 74 of the Act, Code of Practice, which is seeking to reduce disruption to road users caused by utility street works.

The working party helped develop the Street Works Regulations 2000 (charges for prolonged occupation of the Highway), which came into effect on 1 April 2001.

These regulations itemise the responsibilities of all parties and set out the penalties to be imposed should the ‘utilities’ fail to meet their responsibilities.

BT is committed to working within this revised framework.

Using our e-business experience, we also worked with the DETR to develop the Electronic Transfer of Street Works Notices, launched in 1999.

Wires and cables

Complaints relating to our wires and cables range from the visual intrusion to birds sitting on wires creating noise and mess.

2000/01 saw a significant increase in the number of environmental complaints relating to wires and cables. Investigations show that the majority of these relate to cables left lying on the ground. We are developing plans to reduce these incidences.

Overhead works (poles)

There are a number of reasons for replacing poles – safety reasons, raising the height of wires to enable larger vehicles to pass, and so on.

When constructing new pole routes, consideration is given to the environment in which the apparatus is to be placed, particularly in areas of outstanding natural beauty, on listed buildings and other protected areas.

Overhead works (radio)

Radio communication, based upon line of sight transmission between overhead masts, remains an important part of BT's core network; we have around 300 radio stations throughout the UK.

The radio network is used primarily to provide network resilience – a rapid response to traffic congestion, in the event of emergencies, to link cellular radio sites with our fixed network. It is also used in locations where the terrain is particularly difficult, such as mountainous areas. In the Scottish Highlands, for example, most of the core network traffic is carried over radio

However, whilst we are undertaking experiments with satellite links, it will be necessary for these masts to remain a feature of our landscape for some time to come.

Biodiversity

Biodiversity means the whole variety of life on Earth.

Biodiversity is a key test of sustainable development because it:

- enhances quality of life
- provides natural assets from which economic benefits can be derived (e.g. pharmaceuticals)
- demonstrates that the environment is in good health
- enables future generations to meet their needs.

There is now a statutory basis for biodiversity conservation in the Countryside and Rights of Way Act (2000).

BT has published Variety and Values http://www.bt.com/world/sus_dev/in order to advance the discussion of global cultural and biodiversity issues.

Our Environmental Policy <http://www.bt.com/world/environment/policy.htm> describes how we site our buildings, structures and operational plant to minimise their impact on the local environment.

We would argue that most of BT's impact on biodiversity is not directly through our land holdings, but indirectly through our transport, energy and natural resource use. Our environmental policy and environmental management system cover these indirect impacts. We measure and report on our environmental emissions, energy and fuel use etc, using DETR guidelines where possible.

Where we have significant land associated with our sites we work with the appropriate organisations to conserve their biodiversity.

BT also has positive impact on biodiversity through our procurement, property and product stewardship programmes. For example:

- We will only procure telephone/telegraph poles that are sourced from sustainably managed forests
- We are changing the solvent-based paints we used to use to spray our large microwave towers to water-based ones. These towers are often located in remote rural locations often surrounded by unspoiled habitats, and we do not wish to cause possible contamination with the volatile organic compounds that make up the solvents
- a comprehensive recycling programme is in place for the company and its customers preventing over 25,000 tonnes per annum ending up in landfills (18 per cent of our total waste). Operational plant, cable, batteries, oil, mobile phones, paper, toner cartridges and telephone directories are all recycled
- many of our new flexible “workstyle ” office buildings and our telephone exchanges incorporate fresh air rather than refrigerated cooling to minimise their emissions and have bird/bat boxes to encourage local biodiversity.

In order to progress our biodiversity strategy we have worked with Forum of the Future to focus on:

- the impact of the telecommunications sector on biodiversity
- best practice business approaches to management of biodiversity within the telecommunications and other sectors.

The reports resulting from these studies have highlighted that nearly all major companies implicitly manage some of their biodiversity impacts as part of broader environmental, social or sustainability management strategies without drawing these together under the biodiversity umbrella.

In addition to internal initiatives, many companies sponsor biodiversity-related projects. BT has in the past sponsored “Grounds for the Future” to promote biodiversity within schools.

We are now sponsoring the GLOBE UK [<http://www.globe.org.uk>] schools project to measure local biodiversity indicators and post these onto a database via the internet.

Goonhilly Downs SSSI

One of our satellite communications centres, which is a component of The Lizard Special Area of Conservation, is located on Goonhilly Downs, designated an SSSI for its rare lowland heath habitat. Here we have agreed a site management statement with English Nature (EN) to manage the site to maintain and improve its biodiversity. We received the “English Nature SSSI Award for Outstanding Achievement” for the site management statement and follow-up work plan in 1997. Examples from the work plan have appeared in the Earthwatch booklet “Case Studies in Business and Biodiversity”.

Madley Environmental Education Centre

The Madley Environmental Study Centre (MESC) has bid to become a site of excellence in environmental educational studies.

The MESC is on land owned by BT, which has made available 11 acres of wetland, woodland and meadows where children and adults can study or just enjoy the wildlife. MESC is supported by the Environment Agency (EA), Hereford Council and BT.

BT already manages the land for wildlife and will provide technical facilities and support to develop the educational side of the project. The EA is bidding for core funds for purpose-built, innovative classrooms and a lecture auditorium on the site.

Adastral Park socio-economic/biodiversity case study

The BT Exact site at Adastral Park features as a case study of how development can contribute to the socio-economic stability of an area but does not have to be at the expense of biodiversity loss, provided environmental management systems are adopted that aim to minimise the effect on the environment

The study was carried out as part of English Nature's Lifescapes initiative, which aims to help with the delivery of UK Biodiversity Action Plan targets across Natural Areas. Lifescapes is based on working with partners to achieve landscape scale changes to favour wildlife.

The Suffolk Coast and Heaths Natural Area is one of four pilot areas for the Lifescapes initiative. The aim is to enhance wildlife across the Natural Area, working out from the existing sites through habitat re-creation, wildlife-friendly land use and generally building a landscape to favour greater biodiversity. To achieve this change, there is a need to understand the economic and social context of the area, likely trends and the implications for wildlife.

The Adastral Park case study can be viewed here [Adastralcase.pdf](#)

See Also:

- <http://www.sustainable-development.gov.uk/>

Benefits

'ICT is a wonderful tool for creating value, creating an inspired work environment and an opportunity for people to develop themselves'

Ben Verwaayen 2002 <http://homepage.intra.bt.com/transform/benverwaayen.htm>

For BT Chief Executive Ben Verwaayen, communications technology not only benefits business, but the people doing business. Within BT itself, creative use of BT's own products and services enables us both to reduce our consumption of finite materials and improve the work- life balance of our people.

In this benefits aspect section, we attempt to identify some of the benefits that ICT is bringing to BT – the impact of phone and videoconferencing on travel, the social and travel implications of more flexible workstyles, and the impact of e-Business.

This year we were also closely involved in the Global e-Sustainability Initiative ICT sector report prepared for the 2002 World Summit on Sustainable Development. This sets out the views of the communications sector and the impacts of our products and services on the Sustainable Development Agenda.

More information:

- BT Better World:
- Sustainability
- Employees

Conferencing

Conferencing by video, phone or the web is not only more time and cost- efficient than meeting in person, it improves the quality of life for those shouldering the burden of frequent travel. It's also a major benefit for BT's 6,000 home-based workers and a growing number of teleworkers – those who occasionally work from home.

BT Conferencing provides all BT's internal phone, video and e-conference facilities, as well as providing conferencing solutions for customers.

Improving facilities

This year BT Conferencing enhanced its range of meeting enablers. Traditional methods of conferencing have been coupled with new internet technology to create even more options for BT people to share information remotely

Research

The group also conducts regular surveys of the economic, social and environmental performance of our phone conferencing services. The study for 2002 is currently underway and the results will be published on this website next year.

Environmental Impacts

The most recent study of the environmental impact of phone conferencing was commissioned by BT Conferencing in 2001.

The study, of a sample of top-100 BT users of phone conferencing attempted to identify:

- the proportion of conferences which can be considered ‘replacement’ meetings
- the percentage of conferences in local, National and International categories
- the number of miles saved, on average, for each category
- average number of participants per conference call
- number of participants who would have travelled to the meeting.

More information:

Conferencing study conclusions.pdf

Flexible workstyles

Technology is providing more flexible working solutions to better suit the needs of both individuals and businesses.

It is giving us the freedom to work away from the office, but with all the resources we need to do our jobs effectively.

BT has supported and sponsored the development of work-style choices for our people for a number of years. More than 6,000 BT people are now full-time home-based workers, experiencing personal benefits to their lifestyle, while reducing the environmental impact of their travel to and from work.

This year BT is engaged in an EU sponsored study, SUSTEL [[link to www.SUSTEL.org](http://www.SUSTEL.org)], assessing the economic, social and environmental aspects of teleworking. The study runs until December 2004 and will deliver:

- Surveys from five organisations in each of the partner countries (UK, Germany, Italy, Denmark & Holland)
- Case studies from each country
- A Sustainability Assessment Tool
- Business materials
- Policy Recommendations

SUSTEL Report

The report summarises an on-line survey of staff registered with Workabout, BT's official teleworking scheme. Answers were received from 1,874 people – a response rate of 36.5 per cent.

The majority of respondents felt that they had a better life through teleworking than if they commuted to an office:

- 85 per cent felt that their quality of life was good or very good
- 82 per cent felt that teleworking was important or very important to their quality of life
- 73 per cent felt that their work-life balance was good or very good
- 90 per cent were satisfied or very satisfied with teleworking.

A small minority of respondent's felt that teleworking was having negative effects on their life, mainly because of increased working hours.

In addition:

- 33 per cent of respondents stated that their contribution to domestic activity had increased
- 14 per cent reported that it had made it easier to become involved in community activities
- 10 per cent believed that they would be unable to do their present job if unable to telework.

However, 69 per cent of respondents stated that their working hours had increased, with nearly half of all respondents reporting an increase of more than nine hours per week. How can this paradox of higher quality of life but increased working hours be explained? One reason is reduced time commuting, which can free time for both work and private life, and also greatly reduce stress. Another is the ability to multi-task – for example, hanging out washing during breaks – so that there is more quality time at the evening or weekends.

More information:

- SUSTEL BT Pilot Report

e-Business (e-BT)

The increased use of electronic transactions in BT has had clear environmental and social benefits, as well as a positive impact on the bottom line. In the last five years, as we have been transforming BT into e-BT, the use of e-business transactions has resulted in a reduction in the use of paper, ink and other stationery items.

Although the increased use of e-mail is often believed to lead to increased local printing and greater use of printer/copier paper and other consumables, this is not proving to be the case in BT.

Paper Consumption

During the year 2001-2002 BT achieved the following:

- overall paper consumption (excluding directories) was reduced by 570 tonnes (4 per cent)
- copier paper use is stable at 170 tonnes per month – a total of 2,046 tonnes in 2001/2002 – compared to a total of 1,992 tonnes in 2000/2001
- billing paper consumption was reduced by 633 tonnes (11 per cent)
- envelope consumption was reduced by 57 tonnes – and 68 per cent (up from 59 per cent% last year) of envelopes purchased were made of recycled paper
- a decrease in office paper supplies (forms etc) of 106 tonnes
- an overall decrease in internal paper usage of 90 tonnes (3 per cent) compared to last year

Paper consumption figures include the documentation for the rights issue and BT Wireless demerger, amounting to 957 tonnes of paper. This was a one off increase, without which, we would have decreased our paper consumption even more).

Customer Solutions

e-Billing

BT produces millions of bills every year, using millions of sheets of paper. We are developing ways of using our technology to reduce the amount of paper we use and to improve customer service.

In the year ending April 2002 we were able to reduce paper usage in our billing operations of 522 tonnes, thanks to from the introduction of Duplex (double- sided) printers and eBilling solutions.

E-Billing solutions

We can report two key achievements last year:

- A trial of e-billing for our customers culminated in the launch of BT Together online. BT's e-Billing services enable our customers to view their current and previous bills on-line, increase or decrease the level of detail on their accounts, and pay on-line by debit card.
- Business bill consolidation. Business customers opting for consolidated billing receive only one BT invoice regardless of the number of telephone lines they have. Detailed management reports make it easier to see which lines are being used and how, and instant access to raw billing data can be provided on CD-ROM.

Business bill consolidation

Customers opting for consolidated billing receive only one BT invoice regardless of the number of telephone lines they have. Detailed management reports make it easier to see what and how lines are being used, and instant access to raw billing data can be provided on CD-ROM.

Other paperless payments

Customers can arrange to pay by direct debit without completing any paperwork, simply by phoning BT and speaking to an advisor, or by accessing bt.com.

Each paperless sign-up saves us mailing one paper direct debit instruction, one leaflet explaining payment options and one return envelope as well as the envelope it is all sent out in. There is also an automated telephone set-up service on 0800 150111.

Working with others

Ongoing dialogues with a number of national organisations give us an independent view of how we manage our environmental performance and the ways in which this could be improved. In particular, these partnerships focus on the application of information & communications technology for social and environmental benefit.

We are corporate partners of Forum for the Future, a research organisation formed by three of the UK's leading advocates of sustainable development.

UK CEED

BT has worked with the UK Centre for Economic and Environmental Development (UK CEED) an independent charitable foundation specialising in sustainable development research, for several years.

We are also supporting the further development of UK CEED's sustainIT centre. SustainIT is a new research and development centre focusing on the relationship between ICT and sustainable development.

Forum for the Future

We are corporate partners of Forum for the Future, a research organisation formed by three of the UK's leading advocates of sustainable development.

More information

- www.conferencing.bt.com
- <http://www.bt.com> – residential & business billing
- London First
- <http://www.ukceed.co.uk/>
- <http://www.sustainit.org/>
- <http://www.forumforthefuture.org.uk/>

BT Payphones

As the UK's leading Payphone provider, BT Payphones is an important part of BT's public face.

Over 27 million people use our 140,000 public payphones every year.

Our payphone operations raise a number of environmental issues, primarily:

- siting of kiosks and the use of advertising
- materials purchase
- maintenance activities.

Siting and advertising

When siting a payphone, we always consider the environmental impact it will have on its surroundings. And we often work with local authorities to ensure that a wide range of views and options are considered.

In addition, we have drafted a code of practice for responsible advertising on public phone boxes.

It excludes advertising in:

- areas of outstanding natural beauty
- national parks
- the Norfolk Broads
- the Greenbelt
- open countryside
- areas of special control of advertisements
- areas of special county value
- the setting of a listed building
- the setting of a Royal Park
- a World Heritage site and its setting.

In such areas, advertising on the face of kiosk glass has been reserved exclusively for publicising local community action groups.

Payphone advertising will only be introduced into conservation areas following consultation with the relevant local authority.

Our code of practice, which has been agreed by Department of Transport, Local Government and the Regions (DTLR), has been given a similar regulatory status to other outdoor advertisements. This means that BT payphones, or other payphone companies, no longer need to apply for express consent from the planning authority, subject to certain limitations and restrictions.

BT will also work with closed circuit television (CCTV) operators to ensure that advertisements do not obstruct the visibility of cameras. Advertising will be confined to modern kiosks, to one side of boxes and posters will not be displayed on consecutive sides where kiosks are next to each other.

We believe the self-regulation of the code demonstrates our responsible approach to advertising in that it goes beyond the scope of legal planning requirements by looking at issues such as safety, planning and amenity.

Materials purchase

All BT Payphones' suppliers are required to demonstrate their commitment to supporting our environmental impact considerations.

Maintenance activities

We operate a road transport fleet and have made steady progress this year in reducing the environmental impact in this area. Over the last year we have reduced vehicle numbers by 6 per cent and achieved a corresponding reduction in the distance travelled by our fleet of 11 per cent.

We are continuing to monitor vehicle usage carefully and take opportunities to reduce it where we can. It's good for the environment and good business sense for us.