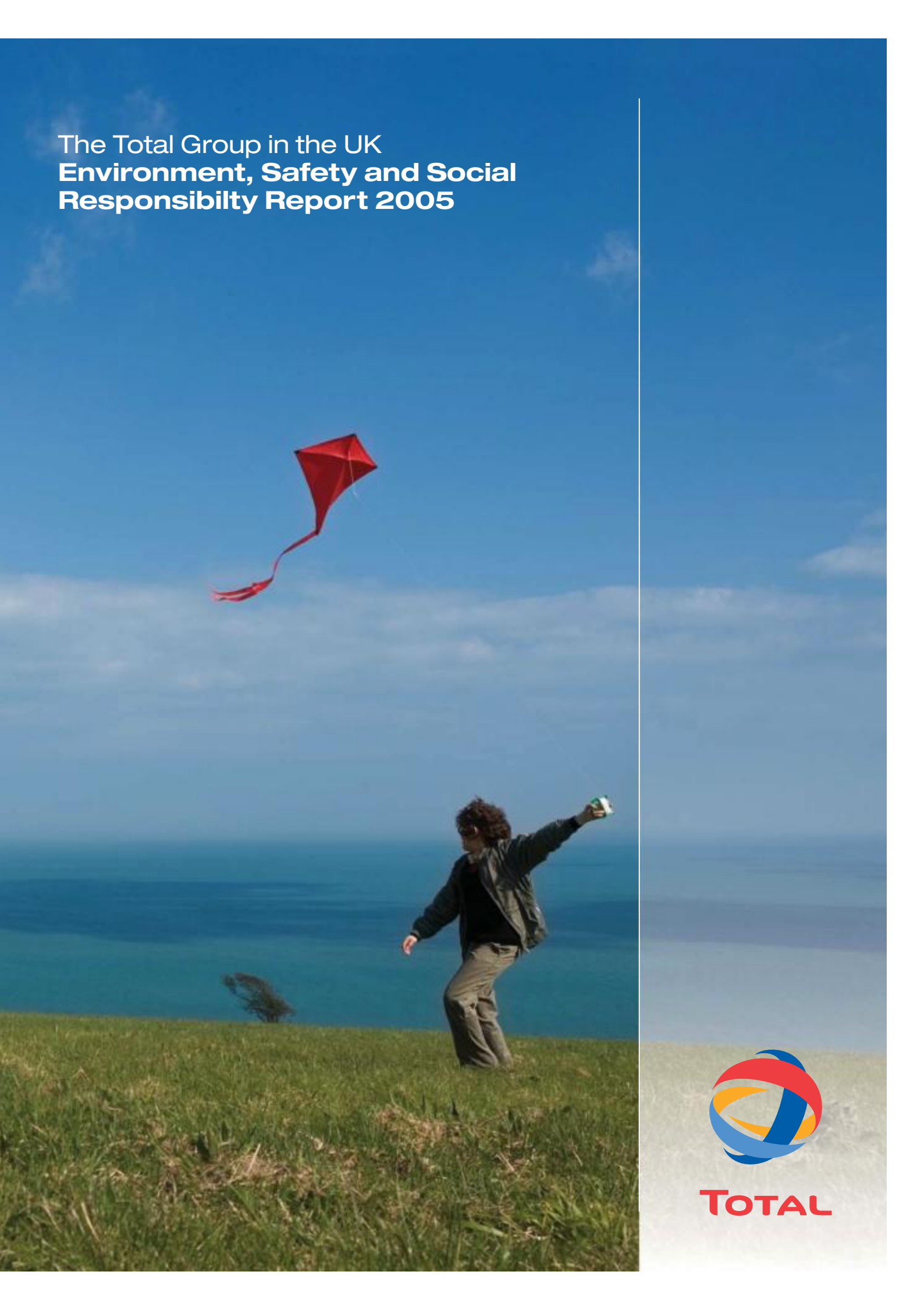


The Total Group in the UK  
**Environment, Safety and Social  
Responsibility Report 2005**



**TOTAL**



## Chairman's overview

### Our responsibility – our response

**“This report highlights notable improvements and achievements but it also shows that we cannot be complacent. We continue to strive for the highest possible standards.”**



This, the fifth report covering the activities of our Total businesses in the UK, may have taken on a new look, but it has still remained true to the original purpose: to provide an honest assessment of our safety and environmental performance.

I wrote in the first document that it was our intention to include the “successes and shortcomings as well as our aspirations” and that, over time, we would publish a time series for key environment and safety statistics. This has been done. Information about our 2004 performance is contained in the following pages, probably in more detail than ever before.

The report highlights notable improvements and achievements. For instance, all our major production facilities – in the upstream, downstream and chemicals sectors – have achieved Environment ISO 14001 accreditation, or will have done so by the end of this year. However, we cannot be complacent. We must continue to strive for the highest possible standards.

In that original report I also promised that over time we would widen the scope of the document. And again this has been done. We have strengthened the coverage of our corporate social responsibility activities, emphasising in particular the way we involve ourselves with the communities in which we operate – such as through the involvement of the Philharmonia Orchestra – and the way we translate the Group's strong Code of Conduct into a tangible ethical stance within the workplace.

The Total Group has a significant presence in the UK, where we have had operations since 1955. Total businesses in the UK generate an annual turnover in excess of £12 billion. We employ more than 7,300.

As an industry leader in all our market sectors – oil and gas exploration and production, energy trading, refining and marketing, and chemicals manufacturing – we recognise that we have a responsibility to a broad spectrum of stakeholders. They range from our shareholders, employees, customers and suppliers to Government and statutory organisations, local authorities, local communities, educational establishments, environmental and safety organisations and a wide variety of charities.

This year's report indicates the steps that are being taken at individual company level to engage with these stakeholders. This has been recognised in a tangible way in the 'downstream' business, where Total UK has been named as one of the Sunday Times Top 100 Best Companies to Work for.

Of course, we must never lose sight of the fact that our primary responsibility is to run a successful, profitable business. Our success is vital to our key stakeholders. However, a successful business cannot be measured purely by the size of its profit margin. It must be responsive to the needs and concerns of society in general. I am pleased to see the constructive and imaginative way in which managements and staff are responding to this challenge.

A handwritten signature in dark ink, reading "Charles Henderson".

**Charles Henderson, CB**  
**Chairman, Total Holdings UK Ltd**

**Total in the UK  
At a glance**

Total Exploration & Production

£1 billion+

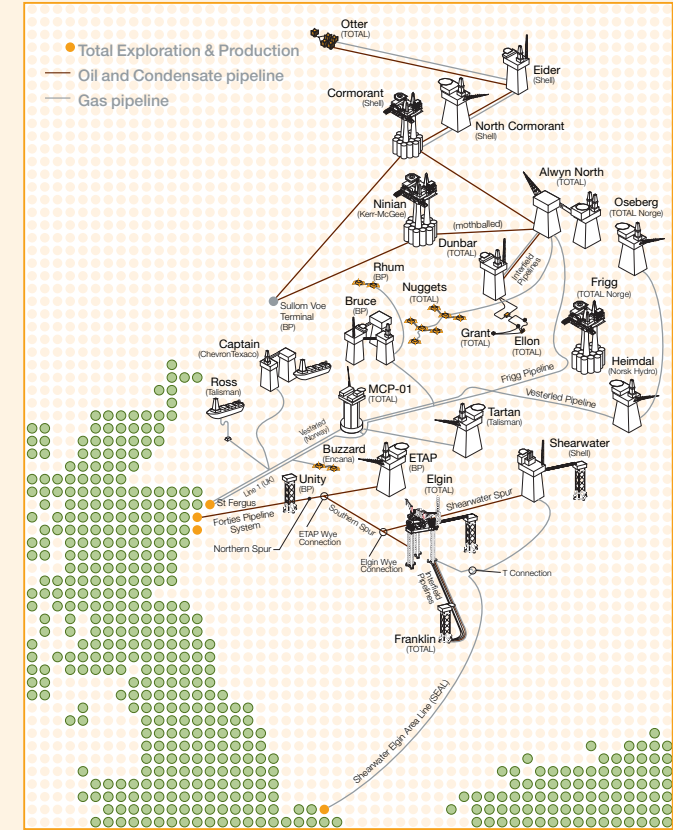
Invested in the UK on developments.

2004

Turnover	£1,605m
Employees	558

Total E&P UK is a leading oil and gas producer on the UK Continental Shelf. From the upstream base in Aberdeen, Total operates the Alwyn Area fields, the high-pressure/high-temperature Elgin-Franklin Field and the St Fergus Gas Terminal. It also has interests in pipelines and a number of non-operated fields. During the 2001-2004 period the company invested more than £1 billion on developments in the UK.

For more information: [www.uk.total.com](http://www.uk.total.com)



Total Gas & Power

65,000+

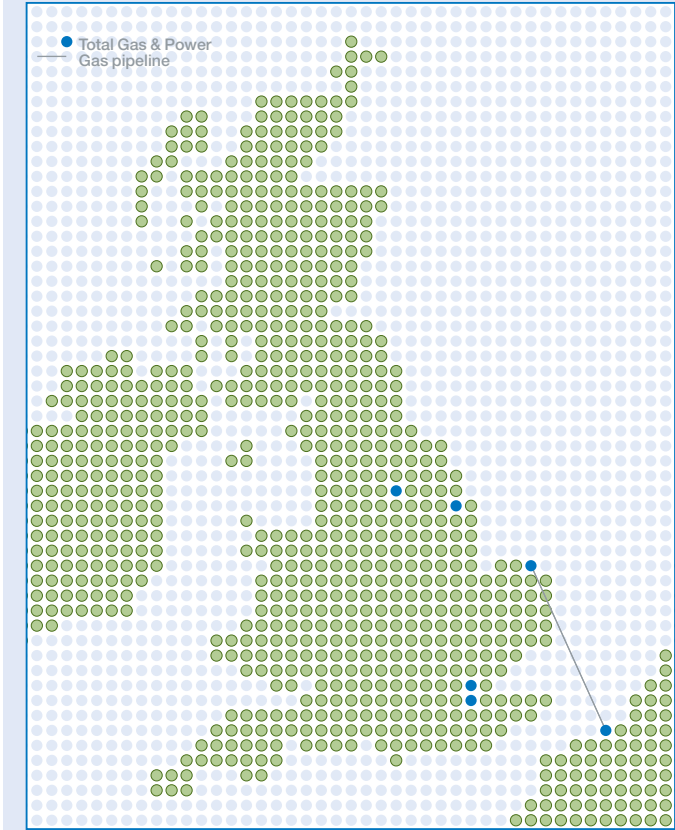
Customers are supplied with a total of over two billion therms of gas.

2004

Turnover	£6,180m
Employees	334

Total Gas & Power UK is one of the most significant gas, electricity and liquefied natural gas traders in Europe. It is also the market leader in the UK's industrial and commercial gas market. More than 65,000 business customers are supplied with a total of over two billion therms of gas. Interests in Humber Power and the Gas Interconnector pipeline between Britain and the Continent support the Group's growing energy business.

For more information: [www.uk.total.com](http://www.uk.total.com)





## Total UK

# £4 billion+

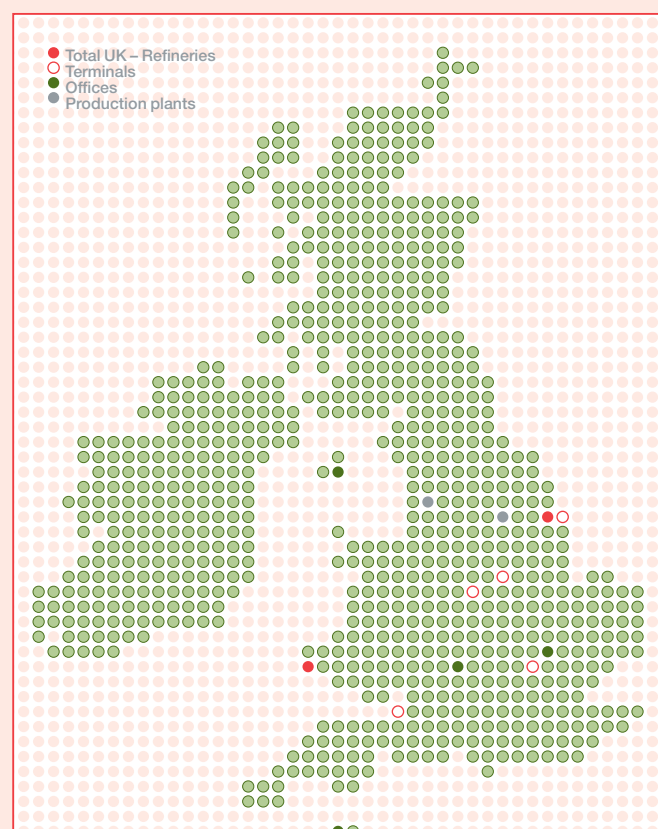
Annual turnover.

2004

Turnover	£4,172m
Employees	5,119

Total UK is one of the leaders in Britain's oil products retail market, with an annual turnover of more than £4 billion. It operates two refineries – Lindsey, at Killingholme, Lincolnshire, and Milford Haven, Pembrokeshire, as well as bitumen and lubricants blending plants and a number of strategically located distribution depots. The company has a large network of branded service stations, as well as significant interests in the aviation and home-heating fuels, lubricants and bitumen sectors.

For more information: [www.total.co.uk](http://www.total.co.uk)



## Total Chemical Businesses

# 1,250+

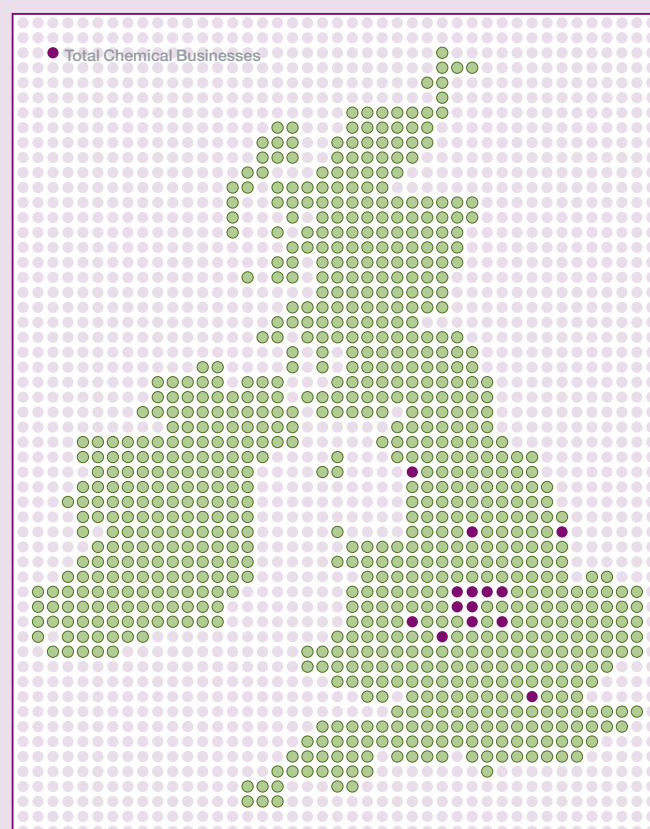
Staff employed over 14 companies.

2004

Turnover	£248m
Employees	1,292

The chemical businesses features among the leaders in the UK industry, and embraces 14 companies including Bostik, Cray Valley, Hutchinson (UK) and Total Petrochemicals. These companies, employing a total of more than 1,250 staff, are involved in the manufacture of products ranging from adhesives and building chemicals to plastics materials and resins.

For more information: [www.uk.total.com](http://www.uk.total.com)



## Total UK Group portrait

“The Group operates with 111,000 employees in more than 130 countries across the energy industry chain.”



# TOTAL

*The logo's spherical shape, airy quality, openness and colours – conveying renewal and a forward-looking approach – reflect the international scope of our businesses, our commitment to multiple energies and our ability to help the world progress and to foster interaction.*

Total is the world's fourth-largest oil and gas company, committed to meeting growing energy demand while acting as a responsible corporate citizen. In 2004, the Group made a net profit of 9.04 billion Euros from a turnover of 122.7 billion Euros.

The Group operates with 111,000 employees in more than 130 countries across the energy industry chain, from oil and gas exploration and production to downstream gas, refining, marketing, trading and shipping. Total is also a world-class chemicals manufacturer.

Oil and gas production increased by two per cent to 2.6 million barrels of oil equivalent a day in 2004. The Group has a well-established and diversified portfolio of proven and probable reserves, which represent nearly 20 years of production at current rates of depletion.

Total is also a world leader in gas production and marketing, as well as power generation. The Group is preparing for future energy needs by developing renewable energies such as wind power and solar power.

With almost 17,000 service stations worldwide, Total is the market leader in Europe and a major player in Africa. The Group also has a strong presence in the Mediterranean basin and growth markets in South-East Asia.

Total has interests in 28 oil refineries, 13 of which it operates. In 2004 the Group refined 2.5 million barrels of oil per day, an increase of 0.6 per cent on the previous year, while sales of product averaged 3.8 million barrels a day, up 3.3 per cent.

The Group's chemicals business is a European or world leader in each of its

markets: petrochemicals, vinyl products, industrial chemicals and performance products, fertilisers, specialities and elastomer processing. Because its products have a broad impact on people's lives, Total's chemicals business innovates constantly to anticipate the needs of an ever-changing society.

Total has a proactive policy related to safety, environmental stewardship, ethical practices, the development of alternative energies, human resource management and an open dialogue with stakeholders. These policies and activities are set out in the Group's Corporate Social Responsibility Report, which is published annually. They are also available on the Group's website, where the Code of Ethics and the Health, Safety, Environment and Quality Charter can also be found.

For more information: [www.total.com](http://www.total.com)



## Total – In harmony with the Philharmonia Orchestra

“You are much, much better than Backstreet Boys and Westlife.” This tribute, from a pupil at Sparkenhoe Primary School, was directed at a classical percussion ensemble, Batterie Percussion, who had performed under a unique partnership between Total in the UK and the world-renowned Philharmonia Orchestra.

The pupil was one of thousands of young people who have had their eyes – and ears – opened to the variety and richness of classical music under a community sponsorship arrangement that has been operating since 2001. Under this scheme, members of the orchestra and prize-winning ensembles have been performing in a variety of locations, from schools to exhibition stands and shopping centres. All the venues have been selected by Total companies throughout the UK.

The venues may seem a long way from the Royal Festival Hall, London, or other world-famous concert halls where the orchestra normally performs. It is, after all, the world’s most-recorded symphony orchestra. But this involvement in the community, and especially with young people, is now seen as a vital part of the orchestra’s life.

“We believe our association with Total is truly ground-breaking,” commented Chris Martin, head of development for the Philharmonia Orchestra. “The relationship is a model for building sustainable links between business and the community. It is enabling many young people to see, often for the first time, that classical music is not alien.”

The partnership has taken a variety of forms. In the past year, a number of Philharmonia musicians have taken classical music to the heart of the community – to the Harlequin Shopping Centre, Watford, close to the headquarters of Total UK, and to the Belfry Shopping Centre, Redhill, near to the offices of Total Gas & Power. In these town centre sites and as part of a Total Noise initiative, children have joined with musicians to perform in front of excited crowds. Music, provided under the scheme, has even been used in management training workshops.

In association with the orchestra and Arts & Business, the Group has also initiated the Total Ensemble Awards and Total Players Awards for young musicians establishing themselves as professional performing ensembles. These award winners – including the Batterie Percussion Quartet, Thorne Trio, Bozza Wind Trio and the Zephyr Wind Quintet – have been performing in a wide variety of locations chosen by Total companies around the country. In many cases it has helped to cement the relationships established between the Group’s operating centres and local schools, such as those close to Total UK’s bitumen processing plant in Preston, Lancashire.

Another aspect of the partnership has been the commissioning of new pieces of music by up-and-coming composers. Some of Total’s employees may have even influenced the composition of this new music.

One of these composers, James Francis Brown, discussed the challenge of composition with staff at Mapa Spontex in Worcester, while questionnaires about composition were sent to a number of UK staff within the Total Group by James Francis Brown and Huw Watkins, the other commissioned composer. The resultant work by James Francis Brown was premiered by the Fidelio Piano Quartet in August 2004 at the highly-regarded Presteigne Festival in Wales. The quartet – another Total Ensemble Award recipient – also performed the work at London’s famous Wigmore Hall in March this year.

The Philharmonia Orchestra is delighted with the partnership, which it sees as sitting at the heart of its own corporate social responsibility engagement. “We are getting to do things that we have always wanted to do in terms of reaching out to the community, especially young people,” said Chris Martin.

The reaction from the young people themselves can be summed up in letters received by Total from teachers and pupils, among them this tribute from Susan Trigg, Arts Co-ordinator at Kirby Muxloe Primary School. Commenting on the “quality experience”, Susan Trigg wrote: “I believe such experiences are invaluable for furthering the cause of music. Since their (the musicians’) visit, another of our children has enlisted for percussion lessons from Leicestershire Arts.”

For more information:  
[www.philharmonia.co.uk](http://www.philharmonia.co.uk)

## Total's Ethics initiative

“There is no such thing as the ethics of a company, only ethics within a company, based on the individual behaviour of its members.”



Total senior managers from across the businesses come together to discuss ethical issues at a seminar chaired by Richard Lanaud, Chairman of the Group Ethics Committee.



In October 2004, some 70 managers from across Total's UK businesses assembled in Hook, Hampshire, to discuss one of the biggest issues facing international companies today: ethics, and in particular, business ethics.

They came together in the realisation that today there are many stakeholders who have an interest in – and thus an influence over – the way in which a business operates. These stakeholders range from shareholders, governments, employees and customers to contractors, suppliers, local communities, non-governmental organisations (NGOs) and the media. The managers were reminded that corporate reputations were at stake – as demonstrated by the Brent Spar controversy and the downfall of Enron.

In the general principles of its Code of Conduct, the Total Group states that it:

- observes the decisions of the United Nations and the European Union, especially with regards to the choice of where it sets up operations;
- is sensitive to the concerns expressed by international, European Union, governmental and non-governmental organisations in matters concerning its operations;
- observes the rules of free competition; and
- rejects bribery and corruption in all forms, whether public or private, active or passive.

Furthermore, the Group states that it strives to uphold the principles of the Universal Declaration of Human Rights, the key conventions of the International Labour Organisation, the OECD Guidelines for Multinational Enterprises, and the principles of the United National Global Compact.

But, as Richard Lanaud, Chairman of the Group Ethics Committee, explained: “There is no such thing as the ethics of a company, only ethics within a company, based on the individual behaviour of its members.” The Group, he said, was keen to ensure that the entire workforce was involved in a “progressive and measurable effort”.





*Rebecca Purves of the Office of Fair Trading (below) takes part in the discussions at the ethics seminar.*



Malcolm Jones, Managing Director of Total UK, remarked that, "To some consumers and NGOs, we are viewed as being an industry of JR Ewings! To counter this, we have to communicate our good messages. Historically the industry has not maximised the good it does; concentrating instead on minimising the bad." Malcolm Jones added, "We are a global organisation, and thinking about how we relate as a global energy group feeds into how we work as individual businesses".

Michel Contie, Managing Director of Total E&P UK, said it was important to strike a balance "between the imperative of making profits and the necessity of adhering to common values which are an integral part of the way we do business".



As a result of the conference, a number of initiatives have been undertaken within Total's UK businesses. There has been the widespread dissemination of the Group's ethics policies among staff. The policies are also emphasised in the induction meetings attended by new joiners. Other steps have been taken. In Total E&P, for example, the policy is now included in employees' annual appraisal discussions. In addition, all contracting staff working for Total E&P must now agree to comply with the policy.

Downstream, Total UK is using an external consultant to carry out an ethical assessment of its operations, while in the chemicals sector, Bostik has framed its own business ethics policy to reinforce and supplement the Group's ethical stance.



This all seems to bear out the aspiration expressed at the conference by Michel Contie: "I hope that at the end of the conference we will go back to our offices with the knowledge that we all share common values".



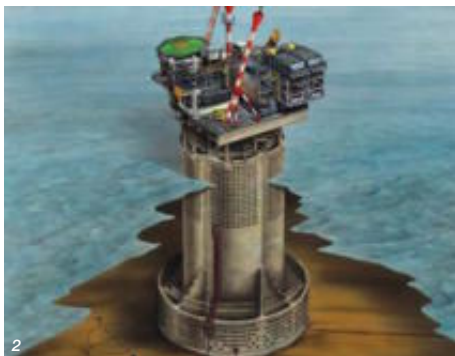


“The company’s strategy for its operations on the UK Continental Shelf embraces the careful stewardship of its existing fields and infrastructure, technology-driven pursuit of new developments and the exploration of deep water. Underpinning this strategy is an explicit policy to maintain the highest levels of environmental and safety management.”



## Oil and Gas Upstream Total Exploration & Production

“Total E&P UK has, as its core values, professionalism, respect for employees, an ongoing concern for safety and environmental protection, and a commitment to contribute to the development of the communities in which it operates.”



1 The St Fergus Terminal on the north-east coast of Scotland.

2 The MCP-01 platform, due for decommissioning and disposal.

3 The control room on Alwyn North Platform.

4 The St Fergus Terminal provides up to 20 per cent of the UK's daily gas requirements.

Our upstream business, Total E&P UK PLC, is the fourth-largest operator in the UK sector of the North Sea in terms of both production and reserves. Based in Aberdeen, we produced about 332,000 barrels of oil equivalent per day from our UK interests in 2004. This represented about 13 per cent of the worldwide production of the Total Group and about nine per cent of the UK's oil and gas production.

### The Business

The company's strategy for its operations on the UK Continental Shelf embraces the careful stewardship of its existing fields and infrastructure, including maximising recovery from producing fields; technology-driven pursuit of new developments, such as complex reservoirs; and the exploration of deep water west of Shetland. Underpinning

this strategy is an explicit policy to maintain the highest levels of environmental and safety management.

During the 2001-2004 period, the company invested more than £1 billion on developments in the UK, of which exploration activity has averaged in excess of £30 million annually.

The company owns and operates five fields in the Alwyn Area of the Northern North Sea (Alwyn North, Dunbar, Ellon, Grant and Nuggets); the Otter Field north-east of Shetland, one of the remotest developments in the North Sea; and the Elgin and Franklin Fields in the Central North Sea. New developments such as the West Franklin and Glenelg Fields draw on Total's expertise in producing oil from reservoirs with extremely high temperatures and pressures.

Total E&P UK also has non-operated interests in a number of other North Sea fields, the SEAL pipeline, and the Sullom Voe Oil Terminal in Shetland.

Onshore, the company operates the St Fergus Gas Terminal on the north-east coast of Scotland. This terminal receives and processes natural gas from about 20 fields, providing up to 20 per cent of the UK's daily gas requirements.

Total E&P UK has, as its core values, professionalism, respect for employees, an on-going concern for safety and environmental protection, and a commitment to contribute to the development of the communities in which it operates. In June 2004, the company involved staff in its first Environmental Awareness Week, now set to become an annual event.





5

5 Pedal power provides a convenient means of transport around the St Fergus Terminal.

6 The Alwyn North platform, one of Total's offshore installations helping to provide about nine per cent of the UK's oil and gas production.



6

Compliance with safety, health and environment policies represents the most important element in the company's key performance indicators for its 590 staff employed in the UK.

For more information: [www.uk.total.com](http://www.uk.total.com)

## Environment

During 2004, the company took steps to improve performance in its management of air and water emissions, as well as waste handling. Progress in these areas was underlined by renewal of the company-wide ISO 14001 accreditation and the Eco-Management and Audit Scheme (EMAS) registration at St Fergus.

Offshore, the company's greenhouse-gas emission intensity was maintained at relatively low levels. Flaring levels were maintained at more than 10 per cent below Department of Trade and Industry (DTI) consent levels in 2004. Flaring performance at Elgin/Franklin continues to improve with production experience and process refinements. A small increase in flaring at Alwyn, in 2004, was partly the result of reduced reservoir pressures requiring greater well-stimulation processes. However, the introduction of more accurate ultrasonic metering equipment also improved the sensitivity of measurements in comparison with previous years.

There has been a renewed push to further improve both energy efficiency and combustion efficiency, especially with a view to reducing carbon-dioxide emissions. Total E&P UK is participating in the EU Emissions Trading Scheme, which commenced in January 2005.

During 2004, Elgin/Franklin operations recorded average oil in discharged produced water content of 19 parts per million, well within the permitted limit of 40ppm and the industry's voluntary limit of 30ppm.

Unfortunately, the Alwyn production platform exceeded the permitted oil-in-water discharge limit of 40ppm in 2004. Much of the problem arose from the produced water from the nearby Dunbar Field, handled by the Alwyn facilities. Both Alwyn and Dunbar are maturing fields where increasing volumes of water are being produced along with oil, and the existing process plant design does not consistently achieve the necessary quality limit. To alleviate the problem, the company is investing £1.5 million on a produced water re-injection project, which will allow all Dunbar water to be injected downhole, as well as modifying control and water-handling processes. Further studies are under way to find a way of re-injecting all produced water from the Alwyn Area.

In 2004, the company took further steps to significantly reduce the environmental impact of chemicals used in its operations, by finding alternatives to chemicals designated as "candidates for substitution" by the UK authorities. In terms of numbers of chemicals, 35 different substitution chemicals were used in 2004, as against 59 in the previous year. This resulted in use of 'substitution' chemicals being reduced from 1,364 tonnes in 2003 to 671 tonnes in 2004.

Environmentally sensitive disposal of drill cuttings continued to receive high priority. Cuttings were handled in one of two ways: re-injected into reservoirs, thus reducing the need for handling and transportation; or, where drilling had been conducted with water-based materials, deposited on the seabed.

Regrettably, in September 2004, the company was fined £20,000 under the Prevention of Oil Pollution Act 1971 for a diesel spill that occurred on the North Alwyn A platform in 2003. The incident involved the release of 7.7 cubic metres of diesel, due to the erroneous diversion of the fuel to a cuttings caisson. The Sheriff did recognise, however, Total's previous good record for environment protection and the company's willingness to learn. As a result of the incident, a number of measures were put in place, including changes to the plant's configuration and improvements in training, especially on management of change.

One of the biggest environmental challenges facing the company in the next few years, is the decommissioning and disposal of the MCP-01 platform, located mid-way along the Frigg gas transportation system. This 386,000-tonne steel-and-concrete facility standing in 94 metres of water – one of the biggest structures installed in the North Sea – has now served its purpose and Total E&P UK is faced with removing it in a safe and environmentally benign way. Fortunately, the platform – which is not normally manned – has been used exclusively for the handling and compression of gas, so the decommissioning process will not involve materials contaminated with oil.



## Wonders of the deep

Important discoveries of several new species of fish and crustaceans have been made, thanks to a novel scientific research project undertaken by Southampton Oceanography Centre (SOC) and Total E&P UK during North Sea drilling operations in 2004. Valuable data and stunning photographs were captured under a project appropriately entitled SERPENT (Scientific and Environment ROV Partnership Using Existing Industrial Technology).

Apart from new species, the deep-sea research revealed creatures never before seen in their natural environment.

The research was undertaken by scientists using a remotely operated vehicle (ROV) employed by Total E&P UK while drilling an appraisal well in the Laggan area of the Faroe-Shetland Channel. SERPENT researcher Daniel Jones was granted residence on Transocean's Jack Bates drilling rig, and access to the ROV when it was not being used by the drilling team.

"We gathered information on what appear to be several new species of animals including small amphipods, which are very small crustaceans, and lycodid fish species," said Dr Ian Hudson, SERPENT Project Co-ordinator. "This is probably the most comprehensive set of information we've got back from a SERPENT mission so far and we are very excited about developing further projects with Total in the future."

The aim is to dispose of the facilities in an environmentally responsible manner, while taking into account technical, safety, social and economic factors. To help achieve this, a diverse group of some 50 stakeholders, ranging from environmental NGOs such as Greenpeace to fishermen's organisations, were invited to take part in the consultation process. Their comments were incorporated in the MCP-01 Decommissioning Programme submitted for statutory consultation in 2005. If approved, it is hoped to proceed with decommissioning the steel topsides in summer 2006.

Onshore, the St Fergus Terminal continued to improve its environmental performance. The terminal met consent limits set by the Scottish Environment Protection Agency (SEPA) under the site's Integrated Pollution Control (IPC) authorisation for nitrogen oxides, sulphur oxides and emissions to water.

All DTI flaring limits were met at the terminal. Nitrogen purging, which minimises emissions of CO<sub>2</sub>, is being progressively introduced at the terminal. Nitrogen purging is now in place on the Miller flare and during 2005 there is a programme for implementing nitrogen purging on the salt flare and the Phase III flare.

Overall waste production at St Fergus was reduced during the year, from 639 tonnes in 2003 to 567 tonnes in 2004. The terminal has an on-going programme to encourage waste reduction and recycling where possible.

## Health and safety

The Think Safety First culture is apparent in all the Total E&P UK locations, and overall the company remains on target to meet its five-year objective of reducing total recordable incidents by 65 per cent from 2001 levels. The number of recordable incidents (the number of lost-time incidents (LTIs), restricted workday cases and medical treatment cases) totalled 21 in 2004, as against 19 in the previous year and 36 in 2002.

The number of recorded safety observations (noting of both positive and negative factors) was sustained at a very high level, numbering about 10,000 during the year. By raising staff awareness of safety issues in this way, the company is working hard to reduce near-miss and lost-time incidents.

The company has taken a number of measures to improve performance on hydrocarbon releases, following an increase in occurrences in 2004. During the year there were 10 hydrocarbon releases on offshore installations, as against just three in 2003, and 10 in each of the previous two years. The company has re-established a work group with the task of reducing the number of such safety hazard incidents.

During this year, a concerted effort has been made to improve maintenance performance and reduce hydrocarbon leaks. The hydrocarbon leak reporting system has been enhanced where all hydrocarbon releases, no matter how minor, are captured in the company's safety database management system, SYNERGI.

The company's behavioural health and safety programme continues to deliver benefits to staff. This has been recognised at the St Fergus Gas Terminal, where staff have won the Scotland Health at Work (SHAW) bronze award.

Since signing up to the SHAW scheme in 2002, the company has promoted a number of in-house initiatives, such as healthy eating and smoking cessation. Professional advice to help staff stop smoking has even been taken to offshore locations. In addition, a series of behavioural safety workshops – highlighting the influence of subconscious behaviour patterns – was also held offshore. Following their launch in 2003, further Way Forward workshops have been held for all staff, led by the company's occupational health nurse.

During 2004, an emergency exercise was held to simulate a major incident and gas release on the Dunbar platform. The exercise focused on testing casualty evacuation procedures and liaison with external emergency response organisations.





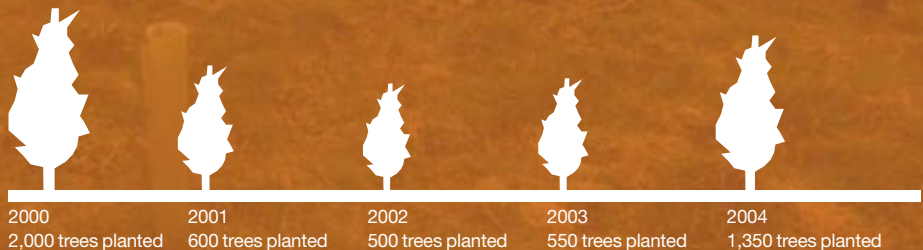
## From little sapplings...

As a result of a joint venture between staff at the St Fergus Gas Terminal, pupils at St Fergus Primary School and Buchan Countryside Group, a small wood of such native Scottish species as whitebeam, ash, birch, willow, fir and spruce has been planted as part of a wildlife garden, on wasteland outside the terminal perimeter fence.

The five-year project was initiated in 2000 as part of the Millennium celebrations and planting has continued annually. The final planting, involving staff and pupils, was undertaken in October 2004. Members of staff at St Fergus plan to maintain the wood and garden within the design originally drawn by the St Fergus Primary School pupils.

# 5000

trees planted in five years



## Our staff and the community in which we work

Total E&P UK has had a strong tradition of involvement with the local community. In 2004 the company invested about £250,000 in a programme of community involvement, including projects related to human and local economic development as well as the environment and good neighbourliness.

As an active participant in the UK Offshore Operators Association and PILOT – the task force involving the Government, operators, service companies and trade unions – the company has taken a leading role in programmes aimed at ensuring a strong future for the UK oil and gas industry. Key areas of work have been optimum management of mature producing fields and the release of fallow exploration acreage.

During the year, the company participated in three Share Fairs, held in Aberdeen, Newcastle and Stavanger, organised under the auspices of PILOT. These fairs were aimed at giving contractors and small and medium-sized enterprises an insight into the future plans of major oil companies, in order to improve their resource and business planning.

A feature of the Total E&P UK community programme, has been the extent to which staff involved themselves in activities. For example, during the year more than 80 volunteers returned to Castle Fraser to complete the second phase of the National Trust for Scotland's Corporate Challenge. Working in teams over a period of eight days, staff continued the restoration of the castle's historic walled garden – work that had been initiated in 2003.

Members of staff also involved themselves in numerous charity-raising events and community projects. These included a scheme run by Music in Hospitals, whereby talented musicians performed in hospitals, hospices and residential homes, a number of them nominated by employees. One ambitious project undertaken by two employees involved trekking through Peruvian mountains and jungle. The expedition raised some £7,000 for the Scottish Society for Autism. Among other projects, three members of staff took part in a freefall abseil from the Forth Rail Bridge in aid of Chest Heart and Stroke Scotland (CHAS).

A significant part of the company's CSR activity in 2004 was directed towards the education of young people. For example, Total E&P UK sponsored the 2004 Reading Challenge launched by the Aberdeenshire Library and Information Service. The project was designed to encourage reading among children aged from six to 16 during the school holidays.

The company also supported the Young Engineers Clubs' Aberdeenshire Showcase and competition. A team from Scotstown Primary School won the competition by designing and helping in the construction of an eco-car. The event was run with the support of the Scottish Council for Development and Industry and COGENT, the UK skills council for the oil, gas, nuclear energy and chemicals industries.

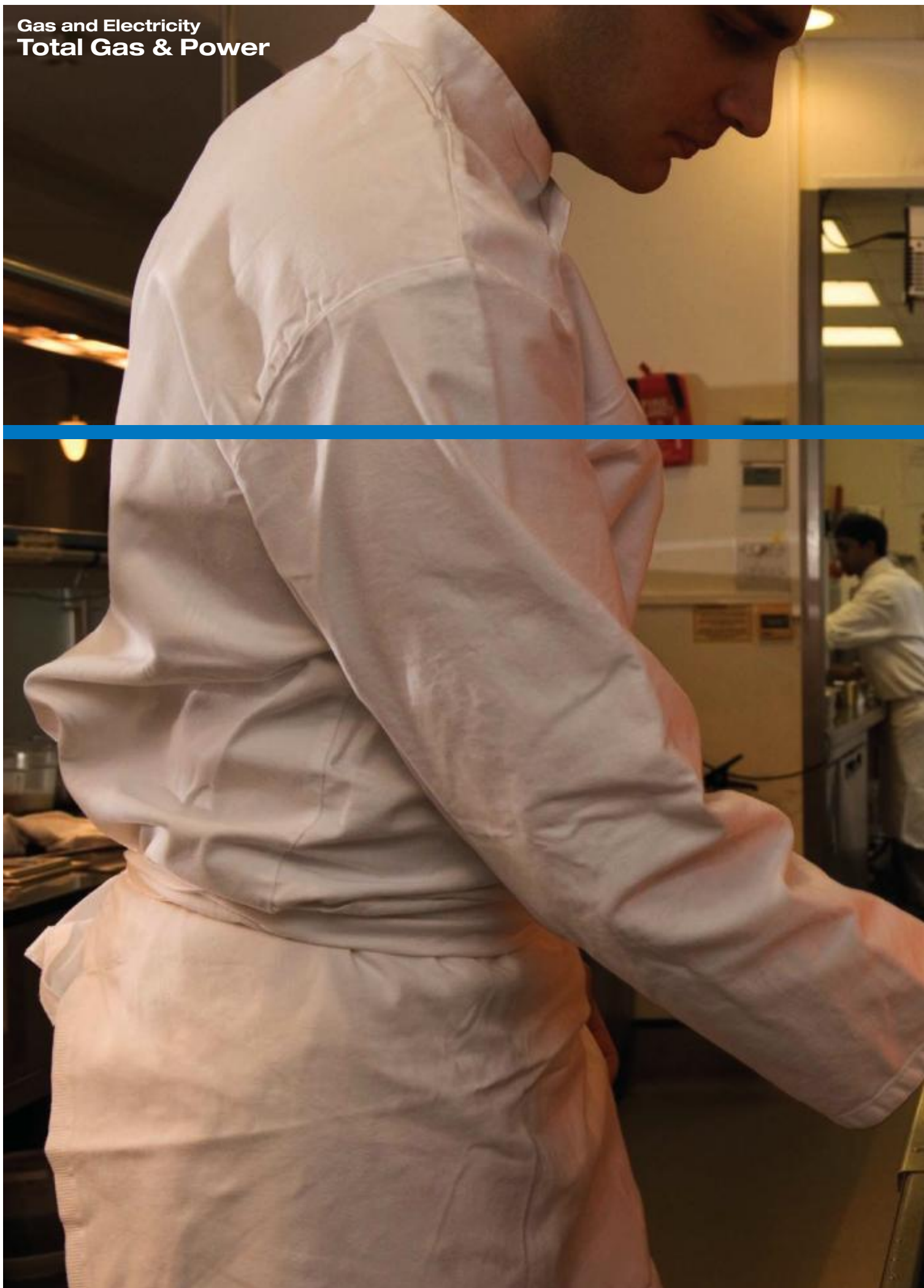
Total E&P UK continues to place emphasis on developing the skills and education of young people who might be attracted to the oil and gas industry. During 2004, the company offered 34 young people the opportunity to experience the workplace, in initiatives ranging from academic scholarships to on-the-job projects and work-experience placement schemes.

In the same vein, the company has an enlightened employment policy, which embraces training, career development, international work experience, age and gender diversity as well as work-life balance. The company has a diversity management procedure, which ensures that there is no discrimination in recruitment activities. These procedures also include an audit of facilities to ensure there is suitable access for disabled staff.

In terms of internationalisation and diversity, the company employed 24 nationalities at the end of 2004. Within the Total Group, 160 employees were working overseas on expatriate status, while 80 non-UK Total employees from Europe, Africa, the Far East and North and South America were working with Total E&P UK.

The company provides recruits and staff with full training and development, in a programme costing £1.4 million annually. No fewer than 580 staff received course-based training in 2004. Throughout 2004 the company took steps to ensure that it had procedures in place for the introduction of the EU Directive on Information and Consultation.

**Gas and Electricity**  
**Total Gas & Power**





“Elf Business Energy has taken a lead in providing energy efficiency advice to its customers and the general public, through its website, information packs and a telephone advice line. The company has published a comprehensive energy-efficiency code, prepared in conjunction with Energywatch, the independent watchdog for gas and electricity. ”



## Gas and Electricity Total Gas & Power

“This operation supplies 20 per cent of the UK’s industrial and commercial gas market. More than 65,000 business customers are supplied with a total of over two billion therms of gas.”



1 & 2 The trading of risk management functions related to gas, electricity and LNG operations based in London.



3, 4 & 5 Total Gas & Power has a major stake in the Humber Power electricity generating plant.



Our Total Gas & Power UK business is one of the most significant gas, electricity and liquefied natural gas traders in Europe, marketing gas and power both in the UK and on the Continent. We provide access to both the traded and end-users’ markets for all the Group’s gas that is not committed to long-term contracts.

### The Business

There are two main arms to the company’s activities. The trading of risk management functions related to gas, electricity and LNG operations, is based at Cavendish Square, London. The industrial and commercial sales activities are conducted by the Elf Business Energy subsidiary based in Redhill, Surrey, with an office in Leeds.

This operation supplies 20 per cent of the UK’s industrial and commercial gas market. More than 65,000 business customers are supplied with a total of over two billion therms of gas. The company is now broadening its energy sales activities into the commercial electricity market.

Total Gas & Power owns and controls 40 per cent of the Humber Power electricity generating plant and has a 10 per cent shareholding in Interconnector (UK) Limited, which owns and operates the Gas Interconnector between Bacton and Zeebrugge in Belgium.

Further information: [www.uk.total.com](http://www.uk.total.com) and [www.elf-business-energy.com](http://www.elf-business-energy.com)

### Environment

Total Gas & Power is essentially an office-based operation with a very small environmental footprint. Nevertheless, it is making a positive contribution through both energy-efficiency measures and waste management. For example, paper and cans are segregated for recycling at Redhill.

Elf Business Energy has taken a leading role in providing energy-efficiency advice to its customers and the general public, through its website, information packs and a telephone advice line. The company has published a comprehensive energy-efficiency code, embodying such advice, which it prepared in conjunction with Energywatch, the independent watchdog for gas and electricity consumers, with the approval of Ofgem, the gas and electricity regulatory body. The company has also worked closely with





## Total Jungle Challenge

When Phil Jones, a graduate recruit in Total Gas & Power, realised that insulin-dependent diabetics were often excluded from taking part in endurance and adventurous activities, he decided to do something about it. Encouraged by his company, Phil persuaded Diabetics UK and Raleigh International to organise a 21-day Malaysian jungle expedition for 15 young diabetics. The Total Jungle Challenge was born.

The expedition, in July 2004, was a great success, proving that diabetes should not be regarded as a barrier to challenging adventure. The young participants, including Phil who is now employed in the Elf Business Energy procurement department, returned with a lasting sense of pride and achievement. A full debrief and celebration was held at the Globe Theatre, London, in October 2004, when members of the Philharmonia Orchestra added to the sense of occasion.

Energy Watch, the Energy Saving Trust and the Carbon Trust in the development of energy-efficiency information. This advice is followed at the company's own Redhill offices, where energy-efficient appliances are employed and employees are encouraged to manage power and heat as efficiently as possible.

In 2004 the company piloted a 'green energy' product to its commercial electricity customers. Under this scheme, being researched and developed in 2005, the company intends to sell 'green' electricity supplied from combined heat and power plants, wind turbines and other such generation sources.

## Health and Safety

Work-station risk assessments are conducted annually at all the company's offices. The Redhill-based operation has its own Health and Safety Committee, while at Cavendish Square, Total Gas & Power participates in the work of the Group head office Health and Safety Committee.

No serious incidents were reported on office premises in 2004. There were four minor incidents, as against 10 recorded in 2003 and 13 in the previous two years.

## Our staff and the community in which we work

As one of the largest employers in the Redhill and Reigate area of Surrey, the Elf Business Energy subsidiary recognises that it has a special responsibility to engage in the local community. With this in mind it has sought the advice of a number of local organisations, including the Surrey Educational Business Partnership, Business in the Community's Cares in Surrey organisation and the local Council for Voluntary Services, to ascertain where it might best direct its community effort.

Following these discussions, the company has developed a corporate social responsibility policy, communicated to all staff, that has three principal aims to:

- "improve the quality of life in the area in which we operate",
- "raise awareness of important community issues", and
- "distinguish Elf Business Energy from other local employers".

During 2004, Redhill and Leeds staff raised funds for a variety of charities and involved themselves in a number of projects in local schools. One of these, in Leeds, resulted in the development of an environmentally friendly outdoor classroom. Executives from Redhill also provided their professional expertise in a number of local schools where pupils were taking business courses.

This level of community involvement is being increased this year. Staff in Redhill and Leeds will undertake up to 80 mandays of voluntary work in their local communities. Half of this time is being donated by the company.

Primary and secondary school children are expected to be the main beneficiaries of this initiative. They were certainly the ones making the most noise when musicians from the Philharmonia Orchestra performed in February at Redhill's Belfry Shopping Centre under the Group's Total Noise programme.

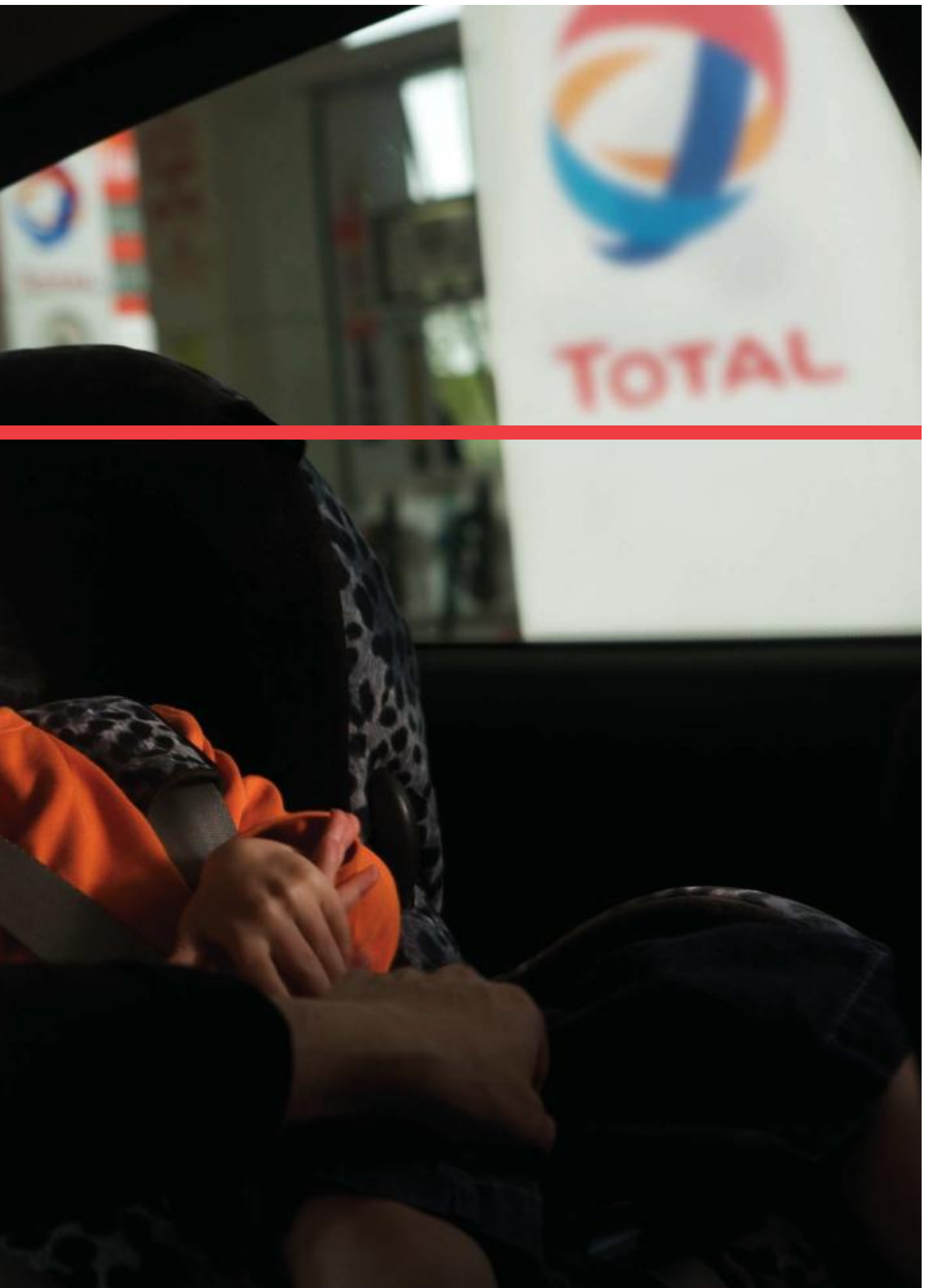
Total Gas & Power's employment policies include a graduate recruitment programme, training, personal and career development, as well as international work experience. Under its personal development programme, this year the company is providing business and management training for 10 staff working at grades B and C, below managerial level.

International work experience has been gained by a Redhill executive working in a liquefied natural gas terminal in India, and a marketer seconded to the Group's headquarters in Paris. A French business school student was provided with work placement at Redhill during 2004. Some 20 expatriate Total staff worked in Cavendish Square in 2004, while four London-based staff worked overseas. Ten students of various nationalities were given work experience in Cavendish Square during 2004.

“The marketing and distribution operation made important progress with its environmental performance in the year under review. More than £4 million was invested in projects directly benefiting the environmental, health and safety aspects of the business.”





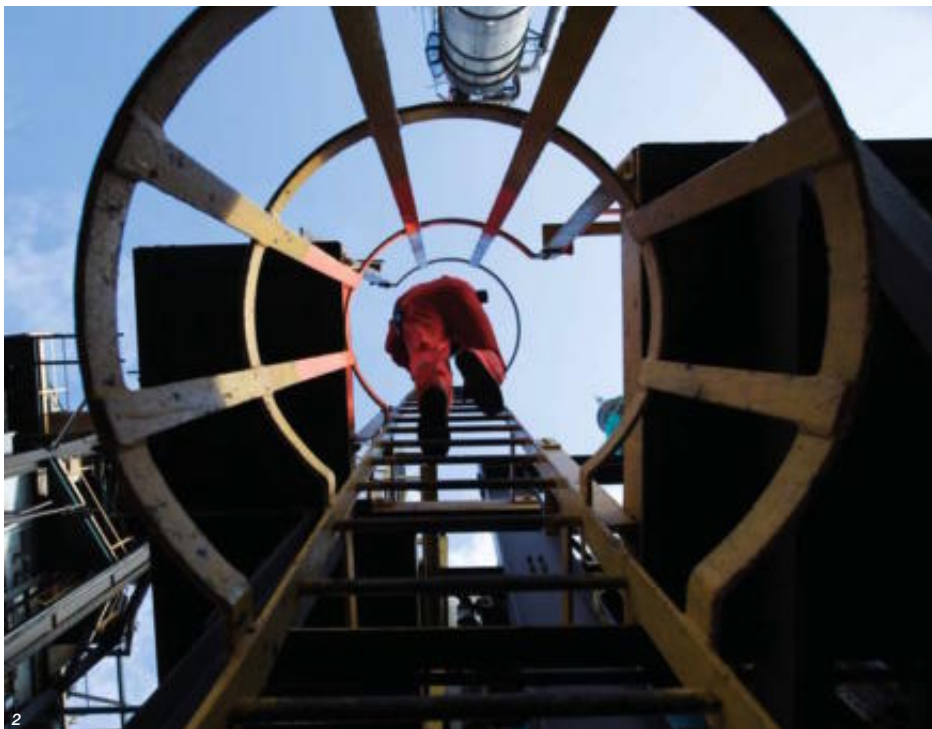


## Refining, Marketing and Distribution Total UK

“During the year the company completed the upgrade of all its company-owned service stations in environmentally-sensitive areas closest to public water supplies.”



1 & 2 Lindsey Oil Refinery at Killingholme, Lincolnshire – the third largest oil refinery in Britain.



Our ‘downstream’ business, Total UK Limited, is one of the UK’s largest oil companies with an annual turnover of more than £4 billion and approximately 5,100 employees in refining, marketing and distribution operations. Our retail and distribution operation, based in Watford, Hertfordshire, produces and sells a wide range of products, from transport fuels, lubricants and heating oils to special fluids, solvents and bitumen.

### The Business

Motor fuels are sold through a network of over 850 service stations; 537 of these sites are company-owned, of which 348 are both owned and operated by Total. Aviation fuel is supplied through the Air Total brand to airports including Heathrow, Gatwick and Stansted, as well as many of the country’s

smaller airfields. Total Butler is one of the largest fuel distributors in the UK. Total UK also has a large network of authorised distributors operating under the Total brand. Nickerson Fuel Oils is the company’s heavy fuel oil division, supplying low sulphur, heavy and medium fuel oil and Power Petroleum supplies fuel to the independent retail market.

Fuel is distributed by road, rail, sea and pipeline to 14 strategically located fuel terminals, five of which it manages – at Milford Haven, Killingholme, Nottingham, Hemel Hempstead and Kingsbury. Refined oil products are delivered by a contracted fleet of tankers.

The company has equity interests in four UK pipeline systems, one being wholly owned and operated and running from Lindsey Oil Refinery to the Hemel Hempstead terminal,

north of London. The other equity share interests are in Mainline Pipeline (MLPL) linking Milford Haven Refinery with the Midlands and the North-West, the UK Oil Pipeline System (UKOP), and the West London Pipeline System (WLPS) supplying Heathrow Airport.

Total UK operates two refineries: Lindsey Oil Refinery, at Killingholme, Lincolnshire, and Milford Haven, Pembrokeshire in which Murco has a 30 per cent interest. Lindsey is Britain’s third largest oil refinery with an annual processing capacity of up to 10 million tonnes. The refinery, employing about 750 staff and contractors, is one of the most complex and technically advanced refineries in Europe, capable of processing more than 40 different types of crude oil. Milford Haven Refinery, situated adjacent to Pembrokeshire Coast National Park, has an annual



processing capacity of 5.5 million tonnes and employs a permanent workforce of about 430 staff and contractors.

For more information:  
[www.total.co.uk](http://www.total.co.uk) and [www.uk.total.com](http://www.uk.total.com)

## Environment

Total UK is continuing to work towards the implementation of environmental management systems across all its operations. It achieved ISO 14001 at three of its four distribution terminals during 2004, following the attainment by Total Bitumen in 2003. At the same time, the quality management standard ISO 9001 was awarded to Total UK's finance and retail operations, including the 550 company-owned sites.

Lindsey Oil Refinery had its ISO 14001 certification reconfirmed in 2004, along with the category A rating under the Environment Agency's Operator and Pollution Risk Appraisal Rating System. Lindsey Oil Refinery also maintained its ISO 17020 Inspection System accreditation. Milford Haven Refinery continued to work towards the attainment of the ISO 14001 (2000) standard, which it expects to achieve during 2005. The refinery also had its ISO 9001 (2000) quality management accreditation confirmed.

The marketing and distribution operation made important progress with its environmental performance in the year under review. The Operating Agreement with the Environment Agency, signed in 2002, has worked successfully.

After describing the agreement in 2003 as representing "best practice", the Agency announced in 2004 that, "This is the first such agreement the Agency has made with a multinational oil company and we are in

discussion with other oil majors to negotiate similar agreements".

In the retail sector, more than £4 million was invested in projects directly benefiting the environmental aspects of the business. This included a continuation of the previous year's work upgrading infrastructure on a risk basis agreed with the Environment Agency, and further site investigation and remedial work on service stations prior to sale. In total about 100 sites were sold in 2004.

The expenditure on environmental improvement works also included £750,000 on a new fume control system at the bitumen processing plant in Preston. The installation of this plant has led to a major reduction in volatile emissions and, as a result, odours. Total Butler continued its £500,000 three-year investment programme to update a number of its sites.

Total UK has worked closely with the Environment Agency on the development of a 'safe deliveries' campaign involving the introduction of new higher standards for delivery points – customer oil-storage facilities, for instance – based on environmental and safety risks. This project was subsequently used as the model for an industry-wide campaign supported by the UK Petroleum Industry Association.

Throughout the company there were 105 recorded spillages involving volumes in excess of five litres during 2004. This level of spillages was 12 per cent below the target set for such incidents and a very big reduction compared with the number recorded in the previous two years – 174 in 2003 and 229 in 2002. In the retail operations the detection of tank and line leaks was vastly improved in 2004, the product of greater operator vigilance, the introduction of external monitoring of fuel

stock and the installation of sophisticated monitoring equipment. As a result, the level of detection is significantly better than the industry standard.

The marketing and distribution organisation introduced a number of waste-management initiatives to promote recycling during 2004. A cardboard-recycling scheme piloted at a number of service stations during the year is due to be extended to all sites owned and operated by Total UK in 2005. At the head office in Watford, recycled paper is used for printing and copying. Paper and plastic cups are recycled along with printer ink cartridges and drink cans. The ink-cartridge and can recycling projects have the added benefit of raising funds for the company's adopted charity, CLIC, which helps children suffering from cancer and leukaemia, and the local hospice respectively.

Lindsey Oil Refinery commissioned a new, high-pressure, steam-importing scheme in December 2004. This scheme, utilising 150 tonnes per hour of steam supplied by the neighbouring ConocoPhillips combined heat and power plant, replaces steam raised from Lindsey Oil Refinery's high-pressure boilers. In this way Lindsey is reducing carbon-dioxide emissions, by 170,000 tonnes annually, as well as energy consumption.

During the year, the refinery also commissioned a £3 million modification to a hydrofluoric acid alkylation plant, where a new rapid acid dump system is significantly improving both environment and safety protection. Other safety and environmental capital projects completed in 2004, included the establishment of remote noise-monitoring equipment to determine nuisance noise levels in the local village of North Killingholme. The equipment alerts operating staff to potential noise problems.





5 & 6 Total UK operates two refineries: Lindsey Oil Refinery, shown here, and Milford Haven in Pembrokeshire.



Regrettably, Lindsey Oil Refinery's strong environmental performance was marred by a potentially serious incident in December 2004. Some 60 cubic metres of crude oil leaked through a 5mm hole that had developed in one of the oil transfer pipelines. The oil initially escaped into a containment pit, but it then overflowed into the South Killingholme drain before the leak was identified. The pipeline was repaired and more than £200,000 was spent on the clean-up operations. There was no identified impact on the local fauna – including birds – and no lasting damage to surrounding vegetation. Local residents and environmental organisations were kept fully informed about the incident, which is being investigated by both the Environment Agency and refinery personnel. Remedial work is to be undertaken to enable an 'intelligent pig' device to check the integrity of the pipeline in the future.

A blockage in a cracking unit separator has also resulted in Environment Agency particulate emission limits being infringed. Given the minimal environmental impact of this infringement, the Agency has given permission for the cracking unit to continue operating at higher particulate levels until the problem can be rectified during the major refinery shut-down, inspection and maintenance operation in the autumn of this year.

Waste management continues to be afforded a high priority at Lindsey. While overall waste production rose in 2004, a substantial increase in recycling activity meant that overall waste disposal fell to 2,829 tonnes, well within the refinery's disposal target of 3,300 tonnes.

During 2004, Milford Haven Refinery invested about £1.5 million on improving environmental standards in line with legislative requirements and best operating practice. Much of the investment involved tackling a recurring

odour problem, which had resulted in complaints from a number of local residents.

Following recommendations from a specialist consultant and discussions with the Environment Agency, the refinery's Environmental Liaison Group, the local authority and local residents, some 15,000 tonnes of sludge was removed from the site's three effluent lagoons between late 2003 and mid-2004. After the sludge was processed into a dry cake, it was spread and biologically treated on the refinery's licensed land farm. An extension to the permitted use of the land farm beyond the original 2003 closure date was negotiated with the local Environment Agency for this purpose, with the land farm closing permanently at the end of July 2004.

Although the desludging operation was thought to have solved that odour problem, further complaints were received in the autumn. Investigations identified another source of odour from the reception and treatment of ballast water offloaded from vessels loading products at the refinery's marine jetty. As a result of the recent history of refinery odour complaints, an improvement notice was issued by the Environment Agency requiring a complete study of the effluent-water treatment system. The completed study recommended a staged approach to tackle the odour problems and was agreed with the Environment Agency. The improvement programme involves initial enhancement to the condition and handling of ballast water and the subsequent installation of additional processes to remove oil – and, if necessary, particulates – from the water.

During 2004, there were three breaches of the Environment Agency's integrated pollution control authorisation, as against five in 2003, seven in 2002 and nine in 2001. The breaches related to a short interruption

of the site's sulphur recovery unit, a temporary exceedance of the authorised fluidised catalytic cracking unit flue gas particulate limit, and a short period of smoky flaring during a unit upset.

High priority is being given to waste management. Changes in landfill regulations mean that the refinery's special or difficult waste, such as tank-bottom sludges, has to be transported much further than in the past, as there are now no authorised sites in Wales. The refinery is now taking steps to provide an even higher level of pre-treatment of such waste in anticipation of tighter regulations being introduced during 2005. The refinery is also making further progress in the segregation and recycling of its general waste, including steel, timber, card, paper and plastic.

In 2004, a temporary meteorological mast was erected at the refinery, primarily to assess the strength and direction of wind patterns. As part of its commitment to sustainable development, the Total Group has announced it is investigating the possibility of erecting a number of wind turbines on the perimeter of the refinery. In addition to gathering weather information, the Group has been making detailed environmental-impact assessments of any turbine development.

### Health and Safety

The marketing and distribution operation has had its best-ever year in terms of health and safety performance. The accident frequency rate – based on the number of LTIs, restricted workday cases and medical treatment cases – fell to 4.2 incidents per million manhours worked in 2004, a 35 per cent improvement on the previous year's performance and a notable reduction on the target for 2004 of 5.08. The number of such incidents fell to 39, a 45 per cent improvement on 2003.





## Total UK – Employer of choice

Total UK has been confirmed as an Employer of Choice. At a ceremony in London in March this year, the company was confirmed as being one of the Sunday Times Top 100 Best Companies to Work For. The company was the first in the Total Group to be recognised in this way – the result of an internal commitment to staff and an impartial external benchmarking of achievements.

The Sunday Times reported that, “Total fosters team spirit and wants staff to be communicative and flexible. This is reciprocated.” It found that 71 per cent of employees were stimulated by the work they did, and 77 per cent believed that they could make a valuable contribution to the success of the organisation.

Importantly, given the products sold by Total UK, more than two thirds of staff believed the company worked to protect the environment, “good enough on this measure to rank the company in the top 25 among the 100 best companies”. Total UK had always offered good benefits to staff but it recognised, through the activities of the Diversity in Total – Commitment to Action group, that there was a lack of focus on this and some other areas.

The seed for developing this focus was planted in February 2004, when the Employer of Choice concept was introduced at the Staff Business Review. The health of the organisation was assessed through a staff survey on such matters as employee benefits, personal development and corporate social responsibility. This survey revealed that while the company had many strengths, more could be done in some areas, such as corporate social responsibility and the communication of staff benefits.

Roadshows were organised and a dedicated intranet area was established. Staff were provided with more information about benefits such as health and ‘well-being’ initiatives, and discounted purchase schemes for computers and bicycles. Even adult road-safety courses were held for those purchasing new bicycles.

“This Employer of Choice initiative has been a valuable vehicle for us to focus on the continually improving health of our organisation,” commented Malcolm Jones, Managing Director of Total UK. “In a way the Sunday Times award is the icing on the cake. What really pleases me is that the original idea came from staff themselves. This is their award.”

The company is now putting greater emphasis on personal responsibility awareness, in a bid to reduce even further the number of accidents. A behavioural safety initiative is undergoing trials, as a means of raising staff awareness of risks and hazards, as well as the need for good housekeeping. The company has also introduced a number of initiatives in its safe-driving campaign. New in-car training courses are being run in conjunction with the Institute of Advanced Motorists.

One of the most pleasing improvements in personnel safety, concerns the industry-wide problem of violence at service stations. In 2004 there were two incidents where staff had to take sick leave as a result of violence. This compares with 17 in 2003 and 33 in 2002. The number of robberies fell to 42 in 2004, as against 68 in 2003 and 110 in 2002.

All the company-operated terminals and the lubricant blending plant at Ferrybridge, West Yorkshire, performed without a lost-time accident in 2004, while the terminal operations and the Lindsey-Hemel Hempstead pipeline were awarded the Royal Society for the Prevention of Accidents (RoSPA) Gold Award in recognition of their safety culture.

In May 2004, the terminal operations retained their Level 3 accreditation under the International Small Site Safety Rating System, and work is under way to extend the system to other parts of the business including retail, the bitumen plant and the lubricant blending plant. During the year, a significant upgrading of fire prevention systems was undertaken at the Hemel Hempstead and Kingsbury terminals.

Lindsey Oil Refinery again received the RoSPA Gold Award for occupational health and safety in 2004. The site is also

certificated at International Safety Rating System (ISRS) Level 8. Notably, the annual maintenance operation, involving 225,000 manhours of work, was carried out with only one lost-time accident – an operator twisted his back while positioning a valve.

Unfortunately, there were five LTIs reportable under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) in 2004, as against two in each of the previous years. Remedial action was taken following an investigation into all the accidents. For example, after an operator had fallen from a flat-bed trailer while offloading pipework, the procedures for handling and off-loading pipes were revised. In another incident an employee fell from a scaffold ladder in the bitumen loading area. Although the reason for the fall could not be ascertained, the scaffolding procedure in the area has been modified to improve the ladder access. In 2004, a project leader was appointed to head up the on-site behavioural safety assessment system in a further effort to reduce accidents.

The number of dangerous occurrences reportable under RIDDOR fell from nine in 2003 to seven in 2004. Potentially the most serious of these was in December, when there was a small explosion and fire on a pontoon of an empty floating-roof crude oil tank. Repair operations were in progress when the incident occurred. Although two men were thrown back by the explosion, neither was seriously hurt. A full investigation into the cause of the incident is now being conducted by both the Health and Safety Executive and the refinery.

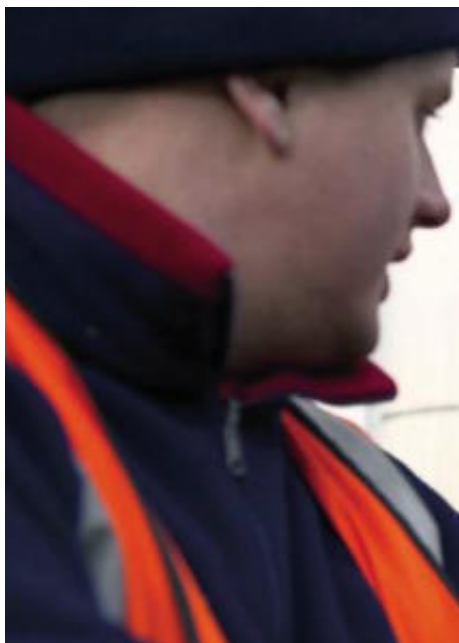
Two emergency exercises were conducted during the year under review. A major ‘off-site’ exercise, involving the emergency services, local hospitals and the Environment Agency, was staged in June. The exercise

was based on a scenario involving the simulated release of a hydrogen-fluoride gas cloud. The other exercise, held in October – simulating an intermediate tank fire – was conducted to test the refinery’s own emergency procedures.

During the year, Milford Haven Refinery achieved a high ISRS Level 8 standard, some four years ahead of the Total Group target date set for refineries. The site embarked on ISRS recognition, audited by Det Norske Veritas, in 2001.

During 2004, contractors received a safety award for reaching more than one million workhours without an LTI. Refinery staff, who had already received such an award in 2003, extended their safe working period to almost 1.5 million workhours without an LTI. These achievements reflected the strong emphasis and commitment to safety management of all personnel on the site. Unfortunately, the achievements were marred by one LTI recorded under RIDDOR and five less-severe injuries recorded under the Total Recordable Injury system.

The RIDDOR LTI involved a contractor who, after striking his head while working in a congested area, fell and injured his ribs. The contractor was wearing full protection gear at the time and was aware of the restrictions presented by the area. The accident was deemed to have arisen because of a lapse in concentration and was classified as a personal safety responsibility issue. Personal safety responsibility was also a factor in the majority of the five recordable injuries. Following these incidents, the refinery has introduced a personal responsibility awareness campaign. In addition, personal risk assessments for all maintenance personnel – staff and contractors – are being introduced during 2005.



## Employees point the way forward

An employee relations action team at Total Lindsey Oil Refinery has drawn up a set of 'core principles' which will determine the way staff at the refinery will conduct themselves in the future. This is one of the tangible results of an employee survey conducted in 2003. Seven action teams were established to make recommendations for improvements in employee relations, communications, policy and procedures, resourcing and succession, recognition and reward, training and development and organisational structure.

No fewer than 20 recommendations by these teams have been implemented so far. They include the introduction of a new 15-year long service award, a revised intranet site for staff, a company contribution to job-related professional fees, and improved internal communication procedures.

But perhaps the most far-reaching of the recommendations, relate to the identification and dissemination of core principles and associated

behaviours. Ten core principles have been set down and endorsed by management. They are:

- We hold safety, health and environmental performance as our number one priority
- We are committed to being a good neighbour and taking an active role in the local community
- We work together to achieve shared goals
- We treat everyone with respect and tolerance, recognising the contribution and achievements of others
- We strive to develop people and make best use of their abilities
- We encourage improved understanding of equipment and processes through the sharing of knowledge
- We develop and sustain the competency and resources required to operate and maintain our plant proficiently
- We maximise our margins by adding value and managing costs in all our activities
- We are committed to supplying consistent, high-quality products and services
- We recognise suppliers as key contributors to our business and work with them for mutual benefit

A notable achievement in both safety and environmental terms was the completion in 2004 of the £10.3 million sweet fractionation unit, a clean fuels project aimed at producing diesel and gasoline with a sulphur content of less than 10ppm. The project, involving 135,000 manhours of work, was completed without an LTI.

Regrettably, in 2004 there were three dangerous occurrences reportable under RIDDOR, as against two in each of the previous two years.

One of the incidents involved the spillage of 500 tonnes of gas oil from a storage tank during rail-tanker loading operations. A transfer pipeline was inadvertently left open, allowing the fuel to flow into another holding tank. The holding tank then overflowed, with the gas oil being captured by a containment bund. Following a thorough investigation into the incident, alarm instrumentation was improved, fuel-handling procedures were reviewed and clarified and lessons learned were communicated to operating staff in a number of 'toolbox' talks.

The second incident involved a gas release and subsequent ignition in one of the furnaces. Although no-one was injured, some structural damage was sustained. Refinery health and safety staff carried out a full investigation of the equipment and working practices and a number of improvements – including modifications to all furnaces and retraining for operating staff – were instigated. The Health and Safety Executive, which was kept fully informed, expressed its full satisfaction with the quality of the investigation and the actions taken.

The third incident involved a small quantity of flammable gas being released from a failed half-inch pipe associated with a pump. There was no fire or injury. An investigation revealed

that the root cause of the problem was water in the system. The water had corroded the pump impeller which, in turn, had initiated a vibration and ultimate failure of the small pipe. All the suspect equipment was replaced and sources of water eliminated.

Early in 2004 a major exercise, simulating a gas release, was held to test procedures, communications and the roles of emergency services. Representatives of the local authorities, representative bodies, the media and each of the key emergency services were involved in the exercise, which was conducted under the Health and Safety Executive's Control of Major Accident Hazards (COMAH).

## Our staff and the community in which we work

The marketing and distribution organisation undertook a number of important initiatives with regards to corporate social responsibility during 2004. A CSR manager was appointed to spearhead the company's relations with various stakeholders, while a CSR working group was established to see how the company's resources could be used creatively in engagement with the communities in which it operates.

Total UK continued with its policy of supporting the local communities where it operates. For example, the company sponsors Watford Football Club and Watford FC's Community Sports and Education Trust. The Trust supports many local initiatives, including the very successful Watford Learning Centre. In 2004 Total extended its support in this area through Total Bitumen's sponsorship of the Preston North End Learning Centre.

In October, the company held its second Total Noise event in the Watford Harlequin Shopping Centre. The popular musical event

was led by a London Philharmonia ensemble, and some 200 children from schools across the town were able to play instruments in interactive workshops supervised by the musicians. A quartet of percussionists from the Philharmonia visited two local schools in Preston, to lead more than 100 children in fully participative sessions. These sessions were highly successful and enjoyed by all.

Total Butler actively supports the rural communities in which it operates, with a major programme of sponsorships. The Rare Breed Survival Trust, the Country Land and Business Trust, the National Federation of Young Farmers' Clubs, the National Ploughing Championships, ARC-Addington Fund and Air Ambulance were among those to benefit from Total Butler's support.

Other community projects supported by subsidiaries in 2004, included the Knottingley Braille Guild by the lubricant blending plant at Ferrybridge, and a number of local hospices.

An Employee Volunteering Scheme has recently been initiated in Total UK, whereby members of staff can apply for up to two days' paid leave to undertake voluntary work. This complements the existing Employee Sponsorship Scheme, whereby employees can apply for sponsorship for a range of good causes, including local charitable events and youth sports teams.

Education has been identified as one of the key areas for support, and a schools programme has been developed covering a range of activities undertaken in partnership with local schools. For instance, members of staff provide mentoring for pupils at the Francis Combe secondary school in Watford, while substantial cash bursaries are awarded to students preparing for university entry. A number of the terminals host visits by school groups, and both Total Lubricants and Total

7 Staff contributed to Total UK's recognition as one of the country's top 100 employers.

8 & 9 Total UK supports many local initiatives including Watford Football Club and Watford FC's Community Sports and Education Trust.



Bitumen undertake a range of initiatives with local schools.

Lindsey Oil Refinery has undertaken a number of initiatives to improve further its relations and communications with the local community. For instance, senior executives from the refinery, usually the General Manager or Operations Manager, now attend meetings of the North Killingholme Parish Council as a guest of the councillors. As a result of this closer involvement in parish affairs, the refinery has agreed to replace all the community's 130 recycling bins. Refinery executives also play an active role in the work of the Killingholme Area Environmental Liaison Committee and the Humber Chemical Focus.

During 2004, the refinery joined the Humber Industry and Nature Conservation Association. As an immediate step Lindsey Oil Refinery commissioned the Association to prepare a woodland management report on a wooded area bordering the refinery site, known as Burkinshaw's Covert. The refinery is anxious to ensure that the woodland is managed in a sustainable way to encourage wildlife. The refinery also supports the Lincolnshire Wildlife Trust and the Child Safety Initiative run by the Access Partnership in conjunction with National Children's Safety Books.

The Lindsey Oil Refinery Maths Challenge, run in conjunction with the local education authority, again attracted widespread interest and participation. As a new venture in 2004, the refinery took part in the Children Challenging Industry programme, aimed at improving the perception of the chemical industry among children and teachers. 12 refinery staff were involved in various events including school visits, site tours and presentations. In addition, six students were provided with work experience at the refinery during 2004.

The charity programme provided £12,000 worth of assistance to a wide variety of organisations, while a further £10,000 was raised for charities, designated by staff, under a safety awards scheme.

More than £250,000 was invested in training and development at Lindsey during 2004. Every member of staff was involved; indeed, the average time spent on training was 4.8 days per person. At the end of the year there were 21 refinery staff working in other parts of the Total Group, while 12 staff were impatriated from other countries.

Milford Haven Refinery, which already has a deep involvement with neighbouring organisations through its charity and sponsorship activities, is stepping up its involvement with the local community. A number of initiatives are underway aimed at providing members of the public with more information about the refinery and its operations, including essential contact points for those seeking information or reassurance.

During 2004, the refinery spent about £45,000 on corporate and social activities. More than 100 schools and organisations received support and sponsorship, including Milford Haven Museum, Milford Haven Civic Society, the Oiled Bird Rescue Centre, Wales Air Ambulance, Pembrokeshire Coastal Forum and the Tinkers Hill Bird of Prey and Swan Rescue Centre.

Many of the projects, selected by refinery employee members of the Sponsorship and Donations Committee, were directed at assisting young people. For instance, the refinery joined the Western Telegraph to assist particularly gifted children write and produce a newspaper. The environmental implications of the refinery featured in the 2004 edition of the newspaper. The refinery was also a prominent sponsor of the

Technique Science Fair, aimed at raising science awareness among school children. An engineer from the site assisted a team of local children with their entry for the Engineering Wales project.

During the year, the refinery played a major role in the South Wales Oil Industry Learning Bursary Scheme, established to improve craft skills in the region, and hosted a visit of young people under the Prince's Trust Next Steps programme. A high-profile presence at the Pembrokeshire Agricultural Show epitomised the refinery's community involvement.

The refinery invested £234,000 on training in 2004. This programme included the introduction of an Institute of Leadership & Management training course for first-line managers. Family-friendly policies were strengthened, resulting in six requests from female members of staff being granted flexible working contracts.

Summer placement positions were provided for eight university students, all of whom had a parent working at the refinery. Four members of the refinery staff are currently working in other parts of the Total Group, while seven are impatriated from other countries.

Two employee surveys were conducted during the year. Among the findings was a call for improved communications and improved personal recognition. Both of these issues were tackled in 2004. A twice-monthly staff newsletter was introduced, along with an upgrading of the refinery's computer intranet site. Bi-annual employee forums with the general manager were also initiated. The year also saw the first 'recognition evening' being held, at which special achievers and their partners were invited to attend a celebratory dinner.





“Our chemical products, used in all aspects of domestic, commercial and industrial life, range from familiar Blu Tack and Evo-Stik adhesives to vital components for the aerospace and automotive industries.”



## Petrochemicals, Polymers and Intermediates Total Chemical Businesses

“The products of our chemicals businesses embrace base chemicals and polymers related to the group’s refining operations; intermediates and performance polymers; and specialist products for industrial and consumer use, including rubber processing, resins, adhesives and electroplating.”

Our chemical products, used in all aspects of domestic, commercial and industrial life, range from familiar Blu Tack and Evo-Stik adhesives to vital components for the aerospace and automotive industries. The products of our chemicals businesses embrace base chemicals and polymers related to the group’s refining operations; intermediates and performance polymers; and specialist products for industrial and consumer use, including rubber processing, resins, adhesives and electroplating.

### The Business

During 2004, Total re-organised much of its chemicals operation in the UK. Most notably, assets previously managed by Atofina were redistributed to two new companies: Arkema and Total Petrochemicals. Arkema was established to consolidate the chlorochemical, intermediate and performance products, while Total Petrochemicals was set up to manage the petrochemicals interests (i.e base chemicals, polyethylene, polypropylene and styrenics).

The businesses comprise the following companies:

#### Arkema

The company, established in October 2004, sells vinyl products, industrial chemicals and performance products. Its industrial facility at Strood in Kent manufactures Perlite filter material from volcanic rock. The head office and commercial functions are based in Solihull, in the West Midlands. The company has 62 employees.

For more information:  
[www.arkemagroup.com](http://www.arkemagroup.com)

#### Atoglas

Based in Birmingham with a warehouse in Solihull, Atoglas sells and distributes Altuglas® acrylic sheet and Tuffak® polycarbonate sheet. It employs 10 people.

For more information: [www.atoglas.com](http://www.atoglas.com)

#### Atotech UK

The company is a leading supplier of surface finishing chemicals and technologies to industry, notably the automotive, electronics, aerospace and engineering sectors. The West Midlands manufacturing plant at West Bromwich and the warehousing facilities at Wednesbury were closed early in 2004, with the result that the UK operations now concentrate on sales, marketing, technical services and distribution. Atotech UK, based in West Bromwich, has 46 employees.

For more information: [www.atotech.com](http://www.atotech.com)

#### Bostik

The company manufactures a wide range of adhesives and sealants for the retail market as well as for the industrial, building and automotive sectors. These products, which include the Bostik and Evo-Stik consumer brands, are manufactured at three UK sites: Stafford, where 372 are employed, Leicester with 180 employees and Barnsley with 30 employees.

For more information: [www.bostik.co.uk](http://www.bostik.co.uk)

#### Cray Valley

Centred on Stallingborough, near Grimsby, Cray Valley is one of the largest companies in the UK resin market. The company, which employs 122, manufactures coating resins for paint, adhesives, inks and sealants, as well as a range of unsaturated polyester resins for architectural sanitary and marine applications.

For more information: [www.crayvalley.com](http://www.crayvalley.com)

#### Hutchinson (UK)

As a subsidiary of the Hutchinson Body Sealing Systems Division, Hutchinson (UK) manufactures weatherstrips and body sealing systems for the automotive industry. The company is based in Telford, Shropshire, where 170 are employed in two manufacturing plants, a warehouse and office complex.

For more information:  
[www.hutchinson-sales.co.uk](http://www.hutchinson-sales.co.uk)



Total chemical businesses supply a wide range of products, ranging from the familiar household names of Bostik (1) to polystyrene manufactured and supplied by Total Petrochemicals (2) and sealing systems for the automotive industry provided by Hutchinson (UK) (3).



### LJF (UK)

As the UK division of Le Joint Français, LJF (UK) specialises in the supply of industrial adhesives and sealants. These products are used in automotive manufacture and repair for windscreen and other fixed-glass replacement. Edge sealants are also used for the manufacture of insulating glass units. The UK division is based in Leicester.

For more information: [www.ljfm.com](http://www.ljfm.com)

### Mapa Spontex UK

The company sells and distributes homecare, baby care and specialist cleaning and hand-protection products. Based at Worcester in the Midlands, Mapa Spontex also has a professional division office in Telford and a warehouse in Tamworth. The company employs a staff of about 50.

For more information: [www.spontex.co.uk](http://www.spontex.co.uk)

### Pamargan

Based in Newtown, Powys, Pamargan is a specialist manufacturer of bonded seals, supplying many of the leading car and commercial-vehicle companies. The products are rubber-to-metal bonded parts that seal high-pressure points. The company employs 97 staff.

For more information: [www.pamargan.co.uk](http://www.pamargan.co.uk)

### Paulstra

The company designs and manufactures anti-vibration systems and components, such as engine mounts and suspension bushes for the automotive industry. A techno-commercial team is based in Rugby, Warwickshire.

For more information:  
[www.paulstra-vibrachoc.com](http://www.paulstra-vibrachoc.com)

### Sovereign Chemicals

The company is market leader in the damp-proofing, tanking and timber treatment renovation sector of the UK construction industry. In addition to damp-proofing and timber preservatives, Sovereign manufactures paints as well as cement and mortar additives. About 100 people are employed in the company, most of them at the manufacturing base in Barrow-in-Furness, Cumbria. The company also has a distribution site at Rutherglen, Glasgow.

For further information:  
[www.sovereignchemicals.com](http://www.sovereignchemicals.com)

### Stop-choc and Barry Controls

These sister companies share the same management and sales teams. Stop-choc, based in Slough, manufactures anti-vibration shock mountings for the aerospace, defence, marine, offshore, railway and industrial markets. Based in Hersham, Surrey, Barry Controls manufactures avionic racking for the civil and military aerospace and defence industries. The company also supplies anti-vibration mountings. Stop-choc employs 52 permanent staff and 10 temporary staff, while Barry Controls employs 50 permanent staff. During 2005 the operations of the two companies are being combined at a single site in Slough.

For more information: [www.stopchoc.co.uk](http://www.stopchoc.co.uk) and [www.barrycontrols.com](http://www.barrycontrols.com)

### Total Petrochemicals UK

Based in Stalybridge, Cheshire, with 129 staff, the company is UK market leader in the manufacture and supply of polystyrene. Its manufacturing site at Stalybridge has a combined capacity of 70,000 tonnes per annum of crystal and impact polystyrene. The company's sales force spearheads the supply and distribution of the polystyrene as well as polyethylene, polypropylene and elastomers manufactured in other parts of the Total Petrochemicals group.

For more information:  
[www.totalpetrochemicals.com](http://www.totalpetrochemicals.com)

Information relating to the health, safety, environment and corporate social responsibility activities of these chemical companies is given on the following pages, with the exception of Atoglas, LJF (UK) and Paulstra.

Atoglas and LJF (UK) each has 10 employees engaged purely in marketing and distribution activities, while Paulstra has just four employees with techno-commercial responsibilities. As reported, Atoglas suffered a serious fire in 2004 although no-one was injured. Neither LJF (UK) nor Paulstra had a reportable health, safety or environmental occurrence during the year.

Further information: [www.uk.total.com](http://www.uk.total.com)



## Environment

A number of the leading chemical sites are accredited to Environment ISO 14001 standard. For instance, Cray Valley has been accredited since 1999. It has also gained Quality Standard ISO 9001 and Occupational Health and Safety Management System (OHSAS) 18001. Atotech UK is also accredited to ISO 14001 and ISO 9001 standard. Hutchinson (UK), which maintained its ISO 14001, held since 1999, also attained ISO automotive industry quality system TS 16949 in 2004. During the year, Total Petrochemicals UK had its ISO 14001 accreditation re-audited and confirmed along with ISO 9001 and OHSAS 18001 within a fully integrated management system. Mapa Spontex maintained its ISO 9001 (2000) standard, achieved in 2003 and Bostik's ISO 14001 accreditation was confirmed at both its Leicester and Stafford sites.

Among the companies working towards ISO 14001 accreditation are Pamargan and Sovereign Chemicals, both of which hope to achieve recognition by the end of 2005, and Stop-choc. Sovereign Chemicals has also improved its accreditation with the BSI by moving from ISO 9002 to the enhanced level of ISO 9001 (2000).

Arkema, which has maintained its ISO 9001 accreditation, operated without an environmental infringement in 2004. During the year the Government-funded Carbon Trust conducted an energy-efficiency audit of the Strood manufacturing site in Kent. The site used 12.5 gigawatts of energy, provided by gas and electricity, in the 12 months to July 2004. The Trust made a number of recommendations, such as the recycling of warm air, and the site is now engaged in a programme of energy-efficiency measures.

For Atoglas, the year was overshadowed by a major fire at its warehouse and office in Solihull in the West Midlands. All the buildings and contents were destroyed. A sales office occupied by Atofina was also destroyed. Fortunately computer records of Atoglas's customers, accounts and stock were recovered and the company managed to continue trading from temporary facilities. Investigations by police and the fire service were continuing at the time of this report's preparation.

Much of Atotech's environmental activity in 2004 was linked to the decommissioning and decontamination of its West Bromwich manufacturing site. Prior to closure, at the end of March, the plant was operated within permitted limits, without any spillages or environmental infringements.

The decommissioning operation was also performed without any environmental detriment. Chemical waste from demolished units was handled at the site effluent treatment plant before it, too, was decommissioned. Raw materials were transferred to other Total Group chemical sites. Atotech has worked closely with the Environment Agency and the Health and Safety Executive throughout the decommissioning and decontamination programme.

Waste management again received much attention. Although the amount of waste produced by the company fell substantially as a result of the manufacturing shut-down – from 457 tonnes in 2003 to 155 tonnes in 2004 – recycling still accounted for a significant proportion. Some 25 tonnes of waste was recycled in 2004, as against 87 tonnes in 2003, 27 tonnes in 2002 and nothing in 2001.

Bostik had a highly successful year in terms of its environmental performance – an achievement recognised with two prominent awards. There were no spills or infringements of regulated standards during the year.

The company invested some £500,000 on infrastructure improvements at its Stafford and Leicester sites in 2004. All these improvements are having a beneficial impact on the company's environmental, health and safety performance. For instance, improvement work at Stafford's boiler house has resulted in the reduction of chemical additives and water usage, as well as eliminating all sulphuric acid in the plant. A major solvented filling-line project under way at Stafford will improve the operating environment, by reducing air emissions and eliminating spillages as well as contributing to a significant reduction in waste. At Leicester, the installation of new chillers on mixing lines has greatly reduced the amount of site well water.

One project, involving improvements to the bitumen processing facility, was the result of a suggestion made from the shop floor. A team leader put forward recommendations for improvements as part of a training scheme. The suggestions were taken up by the company and, as a result, there has been a big reduction in the amount of waste generated. In addition, as a result of changes in the manning regime, the machinery can now be operated as a continuous process.



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This bitumen project, together with the Stafford boiler improvements, resulted in Bostik being awarded the silver gilt prize in the Staffordshire Sustainable Business Awards in 2004. The company did even better in Stafford Borough Council's Green Award scheme, in which it was judged overall winner for its practical waste-minimisation practices. The company continues to put strong emphasis on its waste-management policy.

Much of the work being undertaken in 2005, is directed towards meeting new Integrated Pollution Prevention and Control (IPPC) standards, that are particularly relevant to polymerisation processes at Leicester and Barnsley, as well as higher pollution control standards, that will mainly have a bearing on solvented adhesives operations at Stafford.

For Cray Valley, 2004 was a year of major change. The closure of the Machen manufacturing site in Caerphilly, South Wales in mid-2004 meant that Stallingborough had to absorb an increase in both its capacity and range of products. Demolition and bio-remediation work was started at Machen, with a view to remediating the 53-acre site to a very high 'controlled water' land condition standard. Cray Valley is working very closely with the Environment Agency on this remediation programme.

Production at Stallingborough in 2004 was 44 per cent higher than in the previous year. Nevertheless, the company continued to operate within all its permitted environmental parameters.

During the year, the company invested some £100,000 and a good deal of effort, in tackling an odour problem in three solvent recovery units. A number of complaints were received from members of the public. Steps taken to remove the problem included the sealing of tanks and the installation of carbon filters and monitoring systems. The company took a proactive stance in involving the Environment Agency and the local community. Local residents were kept informed about the measures being taken and meetings were held with local parish councils.

There were five minor spills in 2004, the same number as in the previous years. All were contained within the site boundary and there was no contamination of land or water supply. Where the spills were deemed to be the result of operator error, retraining was provided.

Cray Valley is currently preparing an application for IPPC accreditation. As part of this process, the company is placing renewed emphasis on waste management and the efficient use of energy and water.

Hutchinson (UK), which operated in compliance with all environmental regulations in 2004, undertook a number of capital projects during the year. This work included the installation of improved fume extraction systems around the presses, which helped to upgrade the general ventilation of the manufacturing plant. The mixer was also completely refurbished.

Other projects completed during the year included the installation of a new air compressor system. This replaced the mobile compressor, which had unfortunately been involved in two diesel spillages in 2003. The site operated without a single spillage in 2004, in line with its previous good record.

Waste recycling was again emphasised, with the company continuing development work on systems for separating rubber from metal in rubber/metal waste.

Mapa Spontex's environmental footprint is deemed to be small, given the fact that the company no longer has a UK manufacturing facility. However, waste management continues to receive special attention, with paper, bottles and cans being recycled at all three sites.

Pamargan operated without an environmental incident in 2004. During the year the company continued to work towards the upgrading of its Green Dragon Environmental Standard, promoted by the Welsh Development Agency and Arena Network, and in February 2005 it was awarded Level 4. The company is now working towards Level 5. As part of the preparatory work for reaching this, the highest level, all employees – as well as staff in its five biggest suppliers – are being surveyed to ascertain the carbon footprint of their cars.





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Both Bostik (9 & 11) and Stop-choc (10) recorded a strong safety performance in 2004.



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Improved waste management received further impetus within Pamargan in 2004, when the company reached agreement with its local authority for the recycling of cardboard. In December 2004, the first month of the scheme, 290 kilos of cardboard was recycled. Similar volumes were recycled in the early months of 2005. The recycling of vending-machine plastic cups, introduced in 2003, has continued with the result that more than 100,000 cups were saved from being sent to landfill sites in 2004.

Sovereign Chemicals was successful in maintaining tight control over its effluent and emissions, again completing a year's operation without any infringement of environmental regulations. Residues left in mixing vessels were stored as 'washings' for addition to the next production cycle, thus eliminating the need to discharge effluent to controlled water. The only discharges into the atmosphere were fugitive emissions from the manufacture of solvent-based products. These were deemed to be minimal.

During 2004, Sovereign Chemicals introduced water-based alternatives to a number of the company's solvent-based product range. These included Solvent-Free Invisible Nails and Sovaq Shed Stain. The company also continued the use of soluble packaging for a range of concentrated products. These actions have resulted in a further reduction in both hazardous packaging waste and the exposure of operators and the environment to chemicals.

The company also paid particular attention to waste management: segregating and recycling all packaging and distribution products such as damaged pallets, cardboard, paper and plastic.

Both Stop-choc and Barry Controls had a successful year in terms of compliance with environmental regulations. There was no reportable incident at either site in 2004. Barry Controls saw its Quality Standard ISO 9001 accreditation reconfirmed during the year.

Although Total Petrochemicals UK management and staff were faced with major organisational changes in 2004, they still accomplished a number of notable environmental achievements. At the same time the large manufacturing site maintained output without any spillages or infringements to regulations.

During the year, the company invested £183,000 on capital projects related to the improvement of health, safety, environment and security. Major projects undertaken in this programme included the installation of a new central process control system incorporating duplicate controls and new fire suppression facilities, with the replacement of all halon extinguishing apparatus.

In 2004, Total Petrochemicals UK met the challenging energy targets laid down by the Department of Environment, Food and Rural Affairs (Defra) under the Climate Trade Agreement. These targets were set by the Government for energy-intensive industries faced with meeting the requirements of the IPPC regime and being exposed to international competition while, at the same time, improving energy efficiency and carbon emissions. As a result of meeting its targets – thanks to the energy-efficiency improvement measures put in place in recent years – Stalybridge received a reduction in its Climate Change Levy.

The year also saw the closure and dismantling of a major polystyrene polymerisation plant at Stalybridge. In line with its environmental policy and in the interests of economic recycling, the majority of equipment was sent for re-use in other plants throughout the world.

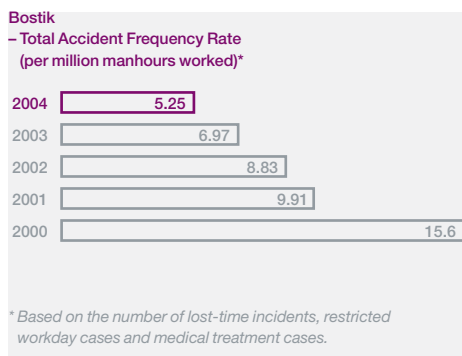
## Health and Safety

Arkema operated without a reportable lost-time accident in 2004, an improvement on the previous year when there were two such incidents. During 2004, the company received a Chemical Industries Association safety award in recognition of its health and safety performance.

The decommissioning and decontamination of Atotech's West Midlands manufacturing site in 2004 was accomplished without a single lost-time accident, a notable achievement given the scale and complexity of the work. The company operated throughout 2004 without a reportable LTI or dangerous occurrence.

This maintained the record established in 2003 and reflects staff vigilance with established accident prevention policies. The closure of the manufacturing facilities has changed the emphasis of health and safety activities which, as a result, are now directed more at staff operating in the field and those working in the laboratory.

Bostik enjoyed one of its best years ever in terms of safety performance. Its accident frequency rate, as calculated under the rigorous statistical system used by the Total Group worldwide, was just 5.25 – appreciably better than the target of 5.7 and a third of the frequency rate in the year 2000.



The strong safety performance was particularly notable at Stafford, where more than 500,000 hours were worked without a single recordable accident. This was the best performance of any of the 49 Bostik plants worldwide in 2004.

Bostik has also introduced new roles and responsibilities for its safety representatives, enabling them to have a greater say in safety policies and management. The scheme was initiated in Stafford in 2004 and is being extended to Leicester and Barnsley in 2005.

Cray Valley had just one reportable LTI in 2004: an operator sprained a wrist while lifting a valve. Emphasis on good safety practices has resulted in a marked reduction of incidents over recent years. There were 20 minor accidents in 2004, as against 60 in 1991 and 95 in 1987. To achieve even better results, the company is taking steps to alert and train staff to avoid the occasional lapses in personal responsibility.

During the year under review, the company invested £71,000 on training and development, much of the programme being directed at improving health, safety and environmental standards. For instance, all plant operators now undertake an NVQ process plant course to Level 2 standard, while all staff in processing units have undertaken computer-based training on flammable liquids and the implications of Control of Substances Hazardous to Health (COSHH) regulations.

A number of health and safety initiatives were taken during the year, including the introduction of a high-visibility policy for operatives and segregation of pedestrians from vehicles. Road-haulage vehicle operators were required to fit four-sided handrails to all road tankers loading at the site. A new hazard reporting system was introduced to give staff a more auditable and structured way of reporting any hazards that might be noticed.

Capital projects under way in 2005 include the installation of a firewater ring-main system, to afford the site better fire protection. Coincidentally, an emergency exercise, simulating an explosion and fire in one of the site's reactors, was held in 2004. The exercise tested emergency procedures, including search, rescue and treatment, and involved the local fire service and St John Ambulance.

Cray Valley is now working towards achieving health and safety standards equivalent to ISRS Level 7 by the end of 2005.

Hutchinson (UK) again operated without a reportable dangerous occurrence in 2004 although, unfortunately, there were four reportable LTIs, two more than in 2003 but one fewer than in 2002. The most serious of these incidents involved a maintenance operative who badly injured a hand while changing a blade in the plant's granulator. Following an investigation into the incident by the company's health and safety staff, new procedures were introduced. Maintenance staff were also retrained and safety procedures were re-emphasised. The other incidents were less serious, two of which resulted from lapses in manual handling procedures. Correct manual handling techniques were emphasised in a specific health and safety campaign during the year.

The company continued to work towards the attainment of OHSAS 18001 certification.

Mapa Spontex, a member of the British Safety Council, again operated without a reportable LTI or dangerous occurrence in 2004. Three members of staff renewed their Red Cross first aid at work qualifications during the year.

Given its strong emphasis on quality management and health and safety, the company conducted a number of safety risk assessments at its offices and warehouse during the year under review. During 2005 these risk assessments, which include display-screen equipment, are being broadened to cover the domestic office environment of sales teams working from home. In 2004, Mapa Spontex introduced the showing of a risk assessment safety video for employees and all new recruits.

Pamargan achieved another year without a reportable lost-time accident. During 2004, external consultants were invited to make an occupational exposure assessment of part of the workplace where chemicals are used. The company was reassured that staff were working in conditions with less than 10 per cent of the appropriate exposure limits.

A campaign to raise the awareness of warehouse personnel in the selection, use and handling of pallets was a contributory factor in Sovereign Chemicals' excellent health and safety performance in 2004. There were no reportable incidents or dangerous occurrences during the year, as against two reportable LTIs in 2003.

**13** Stop-choc manufactures anti-vibration shock mountings for the aerospace, defence, marine, offshore, railway and industrial markets.

**14** Investment in staff development is afforded a high priority at Hutchinson (UK) where all manufacturing operatives have been provided with NVQ Level 2 training.



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Stop-choc and Barry Controls maintained their good health and safety record in 2004. Stop-choc extended the period without a serious recorded accident to six years. There were seven minor accidents during the year, the same number as in 2003, but no-one required hospital treatment or lost a day's work. Stop-choc provided regular lung-function tests for personnel who, in their normal duties, might encounter hazardous fumes. Local exhaust ventilation operations were checked and recorded every week, and regular health and safety audits were conducted to ensure that all members of staff complied with regulations. Barry Controls had no reportable incident or accident in 2004, again extending its period without such an accident to over six years. There were just six minor accidents during the year. In none of the cases was the injury severe enough to require a day's lost work.

Total Petrochemicals UK recorded one LTI in 2004, as against two in the previous year. An operative seriously injured a hand while trying to halt a palletising machine in an unauthorised manner. The Health and Safety Executive investigated the incident and called for a change in risk assessment procedures as well as the implementation of safe systems working procedures for all eventualities, including abnormal situations. These changes have been put in place. The company has also modified the fast-packing bagging and palletising machinery.

The occupational health professional again played a leading role in the implementation of the company's health strategy. In 2004, particular attention was paid to correct manual handling procedures.

### **Our staff and the community in which we work**

Given that Arkema was not established until October 2004, there was limited time to establish a comprehensive corporate responsibility programme. Nevertheless, the company did involve itself in a scheme to encourage apprenticeships among young people, offering an apprentice information technology position to a school leaver. At Strood in Kent, the company continued the sponsorship, originally established by Atofina UK, of the Salters' Institute of Industrial Chemistry festival held annually at the University of Kent. As part of this festival, school science students compete in practical chemistry challenges.

In spite of its limited operations and problems caused by a major fire, Atoglas still managed to support a Christmas appeal at a local Solihull hospice in 2004.

Atotech again put strong emphasis on sharing advice and best practice with two of its key stakeholder groups – its suppliers and customers. In particular, customers have been provided with considerable assistance relating to the regulatory implications of the Health and Safety Executive's Control of Major Accident Hazards (COMAH) as well as IPPC.

The company has played a leading role in the Surface Engineering Association (SEA) and the British Surface Treatment Suppliers Association (BSTSA), assisting with various health and safety campaigns and joining in representations about chemical product reclassifications to Defra. It is also a member of the British Chemical Distributors and Traders Association (BCDTA).

During the year, the company provided work experience for two students from local schools. It also donated modest sums to local charitable organisations, including a local West Bromwich hospice.

Bostik has established strong links with community and charitable organisations in the vicinity of its manufacturing sites. In addition to being a member of Staffordshire Business Environment Network and the North Staffs Health and Safety Group, the company is a prominent supporter of the Staffordshire Wildlife Trust, and the Fire and Rescue Service's fund-raising activities.

A Charity Committee within the company helps to focus charitable activities at the three sites. Among those assisted in 2004 were Sports Aid in the Midlands, Help the Aged, British Heart Foundation and the National Fire Safety Charity for children.

During the year, a number of Bostik staff at Leicester gave up their time to assist in a reading programme in a local primary school. Members of staff also represented the company on local committees of the British Safety Council and RoSPA.





## Specialist Schools Trust award

Total Petrochemicals UK has received a Specialist Schools Trust award in recognition of its partnership with the local West Hill School, close to its Stalybridge site in Cheshire. The Trust is the lead body for the Government's specialist schools programme, which seeks to give more young people access to a good secondary education. Its mission is to establish a network of innovative, high-performing secondary schools in partnership with business and the wider community.

The Total Group forged an alliance with the school in 2003, providing financial support to help it to become a specialist school in sciences. The school has now become a pilot for a new GCSE science course – Science in the 21st Century – designed as a more vocational science qualification for today's world.

As part of their GCSE coursework, pupils were asked to take part in a painting competition, depicting aspects of the Stalybridge site. Many of these impressive paintings now adorn the offices of Total Petrochemicals UK. The winning entry, painted by 11-year-old William Jackson, was chosen by Jean-Bernard Lartigue, who heads up Total Petrochemicals.

There are other mutual benefits to the close ties established between the manufacturing site and the school. For instance, pupils design Total Petrochemicals UK's Christmas cards, while employees from Stalybridge are able to enjoy the school's badminton and five-a-side soccer facilities.

Customers are regarded as important stakeholders within Bostik. With this in mind, the company last year added 1,500 raw material safety datasheets to the 3,500 updated product safety datasheets that are made available to customers.

Other initiatives taken during the year included work placement within Bostik for an information technology student at Staffordshire University. The company also formulated its own ethics policy, communicated to all staff, to underline and supplement the Group stance on ethical behaviour.

Members of Cray Valley staff play an active role in the activities of Humber Chemical Focus, which provides a link between the chemical companies of the region, and local communities and schools. As part of this involvement, the site hosted a visit of school children during the year. Charity fund-raising activities in 2004 included a project to enable terminally ill children to visit Lapland at Christmas time.

During 2004, Cray Valley enabled two secondary school students to gain work experience in the site's engineering department. The company also provided summer placements for a student from Heriot-Watt University, Edinburgh and two students from France. Two Cray Valley employees from the UK worked overseas in 2004, one in the USA and the other in Hong Kong.

Customers are the key stakeholders particularly assisted by Mapa Spontex, with information being provided about the company's cleaning products. In 2004, the company supplemented this information drive with the light-hearted introduction of the Men's Cleaning Academy, a promotion which attracted a good deal of publicity, including a feature on a top daytime television show.

In 2004, Mapa Spontex again provided gifts and assistance to a number of local charities. In addition, staff supported the Wear It Pink breast cancer campaign. During the year the Bozza Wind Trio visited two schools in the Worcester area under the auspices of the Total Group – Philharmonia Orchestra sponsorship arrangement. The popular trio are expected to return to the schools in 2005.

Hutchinson (UK), again faced with assisting staff affected by an on-going redundancy programme, concentrated much of its CSR activity on employee stakeholders. In 2004, basic skills training was provided where applicable and all manufacturing operatives were provided with NVQ Level 2 training.

During the year, the company hosted student visits from a local college, as well as providing work experience for two French students. Staff also took part in a number of local charity initiatives, including the collection of stamps and old Christmas cards. Money raised from the recycling of tin cans was donated to a local school.

Staff in Pamargan took part in a number of charity and fund-raising events in 2004, most notably the high-profile Santa Claus mid-winter run to raise funds for Dial-a-Ride and cancer charities. Community involvement included participation in activities of Arena Network of Wales and the Mid-Wales Manufacturing Group.

In 2004, Stop-choc again participated in the activities of Slough Business Environmental Club, so that various environmental and waste-management issues, common to member companies, could be considered. The employment policies of Stop-choc and Barry Controls – based on equality of treatment, regardless of gender or ethnic background – are exemplified in the diversity of their multicultural workforces.

In addition to maintaining its close links with the neighbouring West Hill School, Total Petrochemicals UK hosted a number of site visits from various local organisations during 2004. The company also organised school visits to the Widnes Catalyst Museum, the Science Discovery Centre.

During the year, the company maintained its Investor in People award in recognition of its training and development of staff. Management took the opportunity of the company's re-organisation to introduce revised induction procedures and personal folder packs for new recruits. In addition to an emphasis on HSE and business ethics responsibilities, recruits are also made aware of corporate social responsibility policies.

# Statistics

## Upstream – Total E & P UK PLC

### Environmental Indicators – offshore

	2004	2003	2002
<b>Total production</b>			
100 per cent share – million barrels of oil equivalents	111.4	131.4	131.3
<b>Atmospheric emissions</b> (tonnes per year)			
Carbon dioxide (CO <sub>2</sub> )	1,150,916	1,164,840	1,249,200
Volatile organic compounds (VOCs)	567	524	583
Methane (CH <sub>4</sub> )	993	1,193	1,357
Sulphur dioxide (SO <sub>2</sub> )	583	534	477 *
Nitrogen oxides (NO <sub>x</sub> )	3,590	3,321	3,365
Carbon monoxide (CO)	1,532	1,591	1,554
Hydrofluorocarbons	2	5	0
<b>Produced water</b>			
Number of excursions above permitted 40 parts per million (ppm)	402	81	11
Average oil in water content (ppm) – <i>Alwyn Area</i>	48.65	27.41	18.51
Weight of oil discharged (tonnes) – <i>Alwyn Area</i>	274	171	72
Average oil in water content (ppm) – <i>Elgin/Franklin</i>	19.13	12.14	11.73
Weight of oil discharged (tonnes) – <i>Elgin/Franklin</i>	6.85	2.17	1.63
<b>Spills and produced water sheens</b>			
Number of oil spills	16	16	5
Oil lost (tonnes)	0.3	6.9	1.05
Number of chemical spills	2	0	0
Chemical lost (tonnes)	0.95	0	0
Number of produced water sheens	24	8	0
Oil lost (tonnes)	9.6	2.46	0

## Environmental Indicators continued – offshore

	2004	2003	2002
<b>Waste</b> (tonnes per year)			
(North Sea including Altens Office, Warehouse and Quay)			
Total waste	<b>3,068</b> **	7,650	4,552
Hazardous waste	<b>1,114</b>	5,588	2,537
Non-hazardous waste	<b>1,954</b>	2,062	2,012
Which includes:			
General waste	<b>727</b>	716	999
Sludge, fluids and tank wash	<b>901</b> ***	2,128	1,967
Scrap metal	<b>956</b>	941	790
Major disposal routes:			
Waste recycled (%)	<b>38</b>	16	25
Waste landfilled (%)	<b>30</b>	59	63

\* Recalculated on the basis of the 2003 calculation.

\*\* Total waste reduced in 2004, as there was only 89 tonnes of mud-based drill cuttings in 2004, as against 3,300 tonnes in 2003.

\*\*\* Sludge, fluids and tank wash figure reduced in 2004, as the volume of amine returned in 2004 was less than in 2003.



## Environmental Indicators – St Fergus

	2004	2003	2002
<b>Overall throughput</b> (sm <sup>3</sup> per day)	<b>47,426,450</b>	49,975,342	40,985,000
<b>Aqueous effluents</b> (annual averages)			
Note: two consents are held for the St Fergus site for discharge to public sewer – Miller and Phase II/III			
<b>Miller*</b>			
Chemical oxygen demand (COD) mg/l	<b>34</b>	43	52
Biochemical oxygen demand (BOD) mg/l	<b>2</b>	4	7
Suspended solids mg/l	<b>7</b>	11	5
Hydrocarbons mg/l	<b>0.3</b>	0.3	0.6
pH	<b>6.61</b>	6.88	7.21
<b>Phase II/III*</b>			
Chemical oxygen demand (COD) mg/l	<b>42</b>	53	61
Biochemical oxygen demand (BOD) mg/l	<b>12</b>	13	8
Suspended solids mg/l	<b>13</b>	16	8
Hydrocarbons mg/l	<b>0.43</b>	0.3	1.3
pH	<b>6.7</b>	6.4	7.16
<b>Air emissions</b> (tonnes per year)			
Volatile organic compounds (VOCs)	<b>74</b>	67	80
Carbon dioxide (CO <sub>2</sub> )	<b>98,628</b>	102,312	93,330
Nitrogen oxides (NO <sub>x</sub> )	<b>84</b>	87	77
Sulphur dioxide (SO <sub>2</sub> )	<b>4</b>	3	5
<b>Waste</b> (tonnes per year)			
Overall waste production	<b>567</b>	639	406
Hazardous	<b>332</b>	264	172
Non-hazardous	<b>235</b>	374	234
Overall waste recycled	<b>100</b>	85	174
Overall waste to landfill	<b>154</b>	149	107
<b>*Emissions limits under IPC regulations for discharge to public sewer</b> (both plants)			
COD	<b>100</b>	100	100
BOD	<b>40</b>	40	40
Suspended solids	<b>50</b>	50	50
Hydrocarbons	<b>40</b>	40	40
pH	<b>5.0-9.0</b>	5.0-9.0	5.0-9.0

## Health and Safety Indicators – offshore and St Fergus

	2004	2003	2002
<b>Employees and contractors</b>			
Fatalities (number)	0	0	0
Number of lost-time incidents reportable under RIDDOR (> three days lost)	8	8	11
Number of dangerous occurrences reportable under RIDDOR	16	12	31
Number of manhours worked *	4,210,000	4,056,000	4,950,000

\* Offshore = 12-hour day; onshore = actual hours worked.

There were no fatalities or injuries to members of the public caused by Total E&P UK operations in 2004, 2003 or 2002.

## Total Gas & Power

### Health and Safety Indicators – Total Gas & Power

(including Redhill, Leeds and London employees and contractors)

	2004	2003	2002
<b>Employees and contractors</b>			
Employees	400	369	343
Fatalities	0	0	0
Number of lost-time incidents reportable under RIDDOR	0	0	0
Number of minor office incidents reported in the accident book	8	10	13

## Refining, Marketing and Distribution – Total UK

### Environmental Indicators – Marketing and Distribution

	2004	2003	2002
<b>Petroleum products marketed</b> (tonnes per year)	<b>10,647,000</b>	10,442,000	11,053,000
<b>Aqueous effluents</b> (tonnes per year)			
Volume <sup>1</sup>	<b>656,622</b>	723,043	839,633
Chemical oxygen demand (COD)	<b>178</b>	222	228
Suspended solids	<b>51</b>	56	64
Hydrocarbons	<b>18</b>	22	26
<b>Spillages</b> <sup>2</sup>	<b>105</b>	174	229
<b>Air emissions</b> (tonnes per year)			
Carbon dioxide (CO <sub>2</sub> ) direct <sup>3</sup>	<b>36,588</b>	44,963	51,824
Nitrogen oxides (NO <sub>x</sub> ) direct <sup>3</sup>	<b>223</b>	279	295
Sulphur dioxide (SO <sub>2</sub> ) direct <sup>3</sup>	<b>51</b>	50	95
<b>Waste</b> (tonnes per year)			
Overall waste production <sup>4</sup>	<b>31,805</b>	20,272	29,880
<b>Hazardous</b>			
Disposal/treatment on/off-site	<b>2,608</b>	2,302	1,947
<b>Non-hazardous</b>			
Disposal/treatment on/off-site	<b>29,197</b>	17,970	27,933
Recycled <sup>5</sup>	<b>1,043</b>	931	885

<sup>1</sup> Non-hazardous aqueous effluent is primarily rain water wash-off, and is dependent upon annual rainfall multiplied by an average contamination level derived from many locations. The volume is therefore subject to change depending on rainfall for the year. Hazardous aqueous effluents which are collected (and not discharged) are reported in the waste section.

<sup>2</sup> Reported spillages include any spill over five litres.

<sup>3</sup> Direct emissions are those stemming from combustion or fuel use, including company-operated transport. We are now reporting only direct emissions from company-operated sources, not including indirect emissions from purchased electricity and services which are not under our control. This reflects current regulatory and reporting trends and Total Group methods.

<sup>4</sup> Numbers vary as this includes soil waste from land remediation projects as well as interceptor and dry waste from service stations.

<sup>5</sup> Recycling is outsourced through contract. The figure is calculated under the Producer Responsibility Obligations (Packaging Waste) Regulations 1997.



## Health and Safety Indicators – Marketing and Distribution

	2004	2003	2002
<b>Employees and contractors</b>			
Fatalities (number)	0	0	0
Number of lost-time incidents reportable under RIDDOR (> three days lost)	25	36	39
Number of dangerous occurrences reportable under RIDDOR	2	0	4
Number of manhours worked – employees	8,234,553	8,388,042	8,783,340
Number of manhours worked – contractors*	755,931	684,406	645,247
<b>Members of public (employees and contractors)</b>			
Accidents (number)**	66	42	39

\* Includes commission-operated stores (Comops).

\*\* Accidents to customers sustaining injury on service station forecourts.

## Environmental Indicators – Milford Haven Refinery

	2004	2003	2002
<b>Overall throughput</b> (tonnes per year)	<b>5,857,147</b>	5,777,780	5,748,564
<b>Workhours</b>	<b>1,171,226</b>	1,021,434	991,484
<b>Aqueous effluents</b> (tonnes per year)			
Volume	<b>3,062,664</b>	2,811,912	2,835,552
Chemical oxygen demand (COD)	<b>70.6</b>	76.8	60.5
Suspended solids	<b>65.6</b>	68.7	64.0
Hydrocarbons	<b>6.9</b>	6.9	5.5
Metals (As + Cd + Cr + Hg + Pb and compounds)	<b>0.008</b>	0.03	0.031
Metals (Cu + Ni + Zn and compounds)	<b>0.233</b>	0.118	0.183
<b>Spillages</b>	<b>1</b>	0	0
<b>Air emissions</b> (tonnes per year)			
Volatile organic compounds (VOCs)	<b>2,913</b>	2,877	2,917
Carbon dioxide (CO <sub>2</sub> )	<b>1,170,564</b>	1,119,870	1,064,534
Nitrogen oxides (NO <sub>x</sub> )	<b>1,950</b>	1,330	1,743
Sulphur dioxide (SO <sub>2</sub> )	<b>4,233</b>	3,801	3,998
<b>Waste</b> (tonnes per year)			
Overall waste production	<b>10,370</b>	8,888	6,336
<b>Hazardous</b>			
Disposal/treatment on-site	<b>5,321 *</b>	5,613 *	2,150
Disposal/treatment off-site	<b>3,945</b>	2,394	2,422
<b>Non-hazardous</b>			
Disposal/treatment on-site	<b>0</b>	0	0
Disposal/treatment off-site	<b>620</b>	414	630
Recycled	<b>483</b>	716	1,134

\* Includes effluent lagoon desludging/processed cake to the site's land farm.

## Health and Safety Indicators – Milford Haven Refinery

	2004	2003	2002
<b>Employees and contractors</b>			
Fatalities (number)	0	0	0
Number of lost-time incidents reportable under RIDDOR (> three days lost)	1	0	3
Number of dangerous occurrences reportable under RIDDOR	3	2	2
Number of hours worked – employees	735,544	734,153	730,903
Number of hours worked – contractors	435,682	287,281	260,581
<b>Members of public (excluding employees and contractors)</b>			
Accidents (number)	0	0	0



## Environmental Indicators – Lindsey Oil Refinery

	2004	2003	2002
<b>Overall throughput</b> (tonnes per year)	<b>10,367,000</b>	9,567,000	9,960,000
<b>Manhours</b>	<b>1,854,346</b>	2,280,906	1,134,004
<b>Aqueous effluents</b> (tonnes per year)			
Volume	<b>2,693,016</b>	2,297,016	2,609,088
Chemical oxygen demand (COD)	<b>212</b>	182	197
Suspended solids	<b>42.6</b>	37.2	49.1
Hydrocarbons	<b>4.08</b>	1.95	2.24
Metals (As + Cd + Cr + Hg + Pb and compounds)	<b>0.0514</b>	0.0388	0.0280
Metals (Cu + Ni + Zn and compounds)	<b>0.0761</b>	0.0863	0.0881
<b>Spillages</b>	<b>0</b>	0	0
<b>Air emissions</b> (tonnes per year)			
Volatile organic compounds (VOCs)	<b>3,959</b>	3,620	3,882
Carbon dioxide (CO <sub>2</sub> )	<b>1,991,881</b>	1,842,563	1,939,972
Nitrogen oxides (NO <sub>x</sub> )	<b>2,493</b>	2,472	2,517
Sulphur dioxide (SO <sub>2</sub> )	<b>10,323</b>	10,539	10,137
<b>Waste</b> (tonnes per year)			
Overall waste production	<b>3,456</b>	3,132	2,194
<b>Hazardous</b>			
Disposal/treatment on-site	<b>0</b>	1,415	773
Disposal/treatment off-site	<b>171</b>	362	363
<b>Non-hazardous</b>			
Disposal/treatment on-site	<b>1,714</b>	208	214
Disposal/treatment off-site	<b>944</b>	999	525
Recycled	<b>626</b>	148	320

## Health and Safety Indicators – Lindsey Oil Refinery

	2004	2003	2002
<b>Employees and contractors</b>			
Fatalities (number)	<b>0</b>	0	0
Number of lost-time incidents reportable under RIDDOR (> three days lost)	<b>5</b>	2	2
Number of dangerous occurrences reportable under RIDDOR	<b>7</b>	9	0
Number of manhours worked – employees	<b>849,694</b>	871,018	838,406
Number of manhours worked – contractors	<b>1,004,652</b>	1,409,888	295,598
<b>Members of public</b> (excluding employees and contractors)			
Accidents (number)	<b>0</b>	0	0

## Petrochemicals, Polymers and Intermediates

### Environmental Indicators – Arkema (Strood)

	2004	2003	2002
<b>Overall production</b> (tonnes per year)	5,242	5,609	5,674
<b>Manhours</b>	24,504	26,461	26,240
<b>Spillages</b>	0	0	0
<b>Air emissions</b> (tonnes per year)			
Volatile organic compounds (VOCs)	0	0	0
Carbon dioxide (CO <sub>2</sub> )	2,075	2,167	2,169
Nitrogen oxides (NO <sub>x</sub> )	2.04	2.4	2.07
Sulphur dioxide (SO <sub>2</sub> )	0	0	0
<b>Waste</b> (tonnes per year)			
Waste production	975	614	469
<b>Non-hazardous</b>			
Disposal/treatment on-site	0	0	0
Disposal/treatment off-site	975	614	469
Recycled	0	0	0

### Health and Safety Indicators – Arkema (Strood)

	2004	2003	2002
<b>Employees and contractors</b>			
Fatalities (number)	0	0	0
Number of lost-time incidents reportable under RIDDOR (> three days lost)	0	2	0
Number of dangerous occurrences reportable under RIDDOR	0	0	0
Number of manhours worked – employees	21,853	23,576	22,920
Number of manhours worked – contractors	2,651	2,885	3,320
<b>Members of public</b> (excluding employees and contractors)			
Accidents (number)	0	0	0

## Environmental Indicators – Atotech

	2004	2003	2002
<b>Overall production</b> (tonnes per year)**	<b>900</b>	4,401	4,467
<b>Manhours*</b>	<b>118,914</b>	157,879	181,085
<b>Aqueous effluents</b> (tonnes per year)***			
Volume	<b>415</b>	1,070	1,200
Chemical oxygen demand (COD)	<b>7</b>	7	6.8
Suspended solids	<b>N/A</b>	N/A	0.4
Hydrocarbons	<b>0</b>	0	0
Metals (As + Cd + Cr + Hg + Pb and compounds)	<b>&lt;0.1</b>	<0.1	<0.1
Metals (Cu + Ni + Zn and compounds)	<b>&lt;0.1</b>	<0.1	<0.1
<b>Spillages***</b>	<b>0</b>	0	0
<b>Air emissions</b> (tonnes per year)**			
Volatile organic compounds (VOCs)	<b>&lt;0.1</b>	<0.1	<0.1
Carbon dioxide (CO <sub>2</sub> )	<b>&lt;1</b>	<1	<1
Nitrogen oxides (NO <sub>x</sub> )	<b>&lt;1</b>	<1	<1
Sulphur dioxide (SO <sub>2</sub> )	<b>&lt;1</b>	<1	<1
<b>Waste</b> (tonnes per year)*			
Waste production	<b>155</b>	457	237
<b>Hazardous</b>			
Disposal/treatment on-site	<b>0</b>	0	0
Disposal/treatment off-site	<b>118</b>	337	168
<b>Non-hazardous</b>			
Disposal/treatment on-site	<b>0</b>	0	0
Disposal/treatment off-site	<b>12</b>	32.9	69
Recycled	<b>25</b>	87.1	27

\* 2004 figures relate to full year.

\*\* 2004 figures relate to January to end March period only.

\*\*\* 2004 figures relate to January to end August period only.

N/A – not available.



## Health and Safety Indicators – Atotech

	2004	2003	2002
<b>Employees and contractors</b>			
Fatalities (number)	0	0	0
Number of lost-time incidents reportable under RIDDOR (> three days lost)	0	0	1
Number of dangerous occurrences reportable under RIDDOR	0	0	0
Number of manhours worked – employees	118,914	156,248	181,085
Number of manhours worked – contractors	0	1,631	12,000
<b>Members of public (excluding employees and contractors)</b>			
Accidents (number)	0	0	0

## Environmental Indicators – Bostik

	2004	2003	2002
<b>Overall production</b> (tonnes per year)	<b>76,349</b>	68,014	56,171
<b>Manhours</b>	<b>1,141,632</b>	1,147,750	1,131,951
<b>Aqueous effluents</b> (tonnes per year)			
Volume	<b>122,113</b>	158,507	171,696
Chemical oxygen demand (COD)	<b>23</b>	112	44
Suspended solids	<b>8</b>	16	29
Hydrocarbons	<b>0</b>	0	0
Metals (As + Cd + Cr + Hg + Pb and compounds)	<b>0</b>	0	0
Metals (Cu + Ni + Zn and compounds)	<b>0</b>	0	0
<b>Spillages</b>	<b>0</b>	0	0
<b>Air emissions</b> (tonnes per year)			
Volatile organic compounds (VOCs)	<b>105</b>	126	126
Carbon dioxide (CO <sub>2</sub> )	<b>10,186</b>	9,087	7,754
Nitrogen oxides (NO <sub>x</sub> )	<b>13</b>	8	9
Sulphur dioxide (SO <sub>2</sub> )	<b>10</b>	2.4	5
<b>Waste</b> (tonnes per year)			
Waste production	<b>4,199</b>	3,172	2,761
<b>Hazardous</b>			
Disposal/treatment on-site	<b>0</b>	0	0
Disposal/treatment off-site	<b>1,715</b>	1,651	918
<b>Non-hazardous</b>			
Disposal/treatment on-site	<b>0</b>	0	0
Disposal/treatment off-site	<b>2,484</b>	1,521	1,843
Recycled	<b>481</b>	455	458

## Health and Safety Indicators – Bostik

	2004	2003	2002
<b>Employees and contractors</b>			
Fatalities (number)	<b>0</b>	0	0
Number of lost-time incidents reportable under RIDDOR (> three days lost)	<b>5</b>	8	7
Number of dangerous occurrences reportable under RIDDOR	<b>1</b>	0	1
Number of manhours worked – employees	<b>1,141,632</b>	1,147,750	1,131,951
Number of manhours worked – contractors	<b>69,600</b>	72,016	73,622
<b>Members of public</b> (excluding employees and contractors)			
Accidents (number)	<b>0</b>	0	0

## Environmental Indicators – Cray Valley, Stallingborough

	2004	2003	2002
<b>Overall production</b> (tonnes per year)	<b>60,003</b>	<b>41,662</b>	<b>37,387</b>
<b>Manhours</b>	<b>248,303</b>	<b>210,881</b>	<b>192,296</b>
<b>Aqueous effluents</b> (tonnes per year)			
Volume	25,641	31,025	26,572
Chemical oxygen demand (COD)	27.5	38.9	10.7
Suspended solids	11.3	20	1.5
Hydrocarbons	0	0	0
Metals (As + Cd + Cr + Hg + Pb and compounds)	0	0	0
Metals (Cu + Ni + Zn and compounds)	0	0	0
<b>Spillages</b> (over 150L)	<b>5</b>	<b>5</b>	<b>3</b>
<b>Air emissions</b> (tonnes per year)			
Volatile organic compounds (VOCs)	16.9	15.2	16.2
Carbon dioxide (CO <sub>2</sub> )	5,317	4,239	3,252
Nitrogen oxides (NO <sub>x</sub> )	0.237	0.260	0.214
Sulphur dioxide (SO <sub>2</sub> )	0	0	0
<b>Waste</b> (tonnes per year)			
Waste production	844	975	654
<b>Hazardous</b>			
Disposal/treatment on-site	0	0	0
Disposal/treatment off-site	844	975	654
<b>Non-hazardous</b>			
Disposal/treatment on-site	0	0	0
Disposal/treatment off-site	832	540	714
Recycled	52	177	83

## Health and Safety Indicators – Cray Valley, Stallingborough

	2004	2003	2002
<b>Employees and contractors</b>			
Fatalities (number)	0	0	0
Number of lost-time incidents reportable under RIDDOR (> three days lost)	1	0	3
Number of dangerous occurrences reportable under RIDDOR	0	0	0
Number of manhours worked – employees	248,303	210,881	192,296
Number of manhours worked – contractors	31,209	38,560	50,000
<b>Members of public</b> (excluding employees and contractors)			
Accidents (number)	0	0	0



## Environmental Indicators – Hutchinson (UK)

	2004	2003	2002
<b>Overall production</b> (tonnes per year)	5,000,000	7,900,000	10,500,000
<b>Manhours</b>	349,606	475,538	622,079
<b>Spillages</b>	0	2	0
<b>Air emissions</b> (gr/part produced)			
Volatile organic compounds (VOCs)	0.64	0.72	0.8
<b>Waste</b> (tonnes per year)			
Waste production	1,114	1,452	2,421
<b>Hazardous</b>			
Disposal/treatment on-site	0	0	0
Disposal/treatment off-site	17	20	24
<b>Non-hazardous</b>			
Disposal/treatment on-site	0	0	0
Disposal/treatment off-site	617	836	1,682
Recycled	480	596	715

## Health and Safety Indicators – Hutchinson (UK)

	2004	2003	2002
<b>Employees and contractors</b>			
Fatalities (number)	0	0	0
Number of lost-time incidents reportable under RIDDOR (> three days lost)	4	2	5
Number of dangerous occurrences reportable under RIDDOR	0	0	0
Number of manhours worked – employees	349,606	475,538	622,079
Number of manhours worked – contractors	700	953	1,145
<b>Members of public</b> (excluding employees and contractors)			
Accidents (number)	0	0	0

## Health and Safety Indicators – Mapa Spontex UK

	2004	2003	2002
<b>Employees and contractors</b>			
Fatalities (number)	0	0	0
Number of lost-time incidents reportable under RIDDOR (> three days lost)	0	0	0
Number of dangerous occurrences reportable under RIDDOR	0	0	0
Number of manhours worked – employees	94,872	138,942	282,836
Number of manhours worked – contractors	0	7,800	9,360
<b>Members of public (excluding employees and contractors)</b>			
Accidents (number)	0	0	0

## Environmental Indicators – Pamargan

	2004	2003	2002
<b>Total production</b> (units per year)	<b>101,449,623</b>	85,352,678	73,106,369
<b>Manhours</b> (production)	<b>95,500</b>	76,000	59,800
<b>Spillages</b>	<b>0</b>	0	0
<b>Waste</b>			
Waste production – litres	<b>615</b>	820	1,141
Waste production – cubic metres	<b>252</b>	210	204
<b>Hazardous</b>			
Disposal/treatment on-site	<b>N/A</b>	N/A	N/A
Disposal/treatment off-site in litres	<b>615</b>	820	1,141
<b>Non-hazardous</b>			
Disposal/treatment on-site	<b>N/A</b>	N/A	N/A
Disposal/treatment off-site in cubic metres	<b>252</b>	210	204
Recycled	<b>N/A</b>	N/A	N/A

N/A – not available.

## Health and Safety Indicators – Pamargan

	2004	2003	2002
<b>Employees and contractors</b>			
Fatalities (number)	<b>0</b>	0	0
Number of lost-time incidents reportable under RIDDOR (> three days lost)	<b>0</b>	0	0
Number of dangerous occurrences reportable under RIDDOR	<b>0</b>	0	0
Number of manhours worked – employees	<b>184,612</b>	157,223	132,995
Number of manhours worked – contractors	<b>31</b>	0	0
<b>Members of public</b> (excluding employees and contractors)			
Accidents (number)	<b>0</b>	0	0



## Environmental Indicators – Sovereign Chemicals

	2004	2003	2002
<b>Overall production</b> (tonnes per year)	<b>7,300</b>	8,758	10,134
<b>Manhours</b>	<b>167,428</b>	197,858	222,019
<b>Spillages</b>	<b>0</b>	0	0
<b>Air emissions</b> (tonnes per year)			
Volatile organic compounds (VOCs)	<b>0</b>	0	0
Carbon dioxide (CO <sub>2</sub> )	<b>273.62</b>	396.5	442.36
Nitrogen oxides (NO <sub>x</sub> )	<b>0.36</b>	0.54	0.8
Sulphur dioxide (SO <sub>2</sub> )	<b>0.31</b>	0.5	0.56
<b>Waste</b> (tonnes per year)			
Waste production	<b>158.2</b>	132.8	134.7
<b>Hazardous</b>			
Disposal/treatment on-site	<b>0</b>	0	0
Disposal/treatment off-site	<b>4.6</b>	15.8	14.7
<b>Non-hazardous</b>			
Disposal/treatment on-site	<b>0</b>	0	0
Disposal/treatment off-site	<b>153.6</b>	117	120
Recycled	<b>49.9</b>	60.8	63.8

## Health and Safety Indicators – Sovereign Chemicals

	2004	2003	2002
<b>Employees and contractors</b>			
Fatalities (number)	<b>0</b>	0	0
Number of lost-time incidents reportable under RIDDOR (> three days lost)	<b>0</b>	2	0
Number of dangerous occurrences reportable under RIDDOR	<b>0</b>	0	0
Number of manhours worked – employees	<b>167,428</b>	197,858	222,019
Number of manhours worked – contractors	<b>0</b>	0	0
<b>Members of public</b> (excluding employees and contractors)			
Accidents (number)	<b>0</b>	0	0

## Environmental Indicators – Stop-choc

	2004	2003	2002
<b>Manhours</b>	<b>112,777</b>	103,599	112,167
<b>Spillages</b>	<b>0</b>	0	0
<b>Waste</b> (tonnes per year)			
Waste production	<b>5</b>	5	7.5
<b>Hazardous</b>			
Disposal/treatment on-site	<b>0</b>	0	0
Disposal/treatment off-site	<b>1</b>	0	1
<b>Non-hazardous</b>			
Disposal/treatment on-site	<b>0</b>	0	0
Disposal/treatment off-site	<b>4</b>	5	6.5
Recycled	<b>0</b>	0	0.5

## Health and Safety Indicators – Stop-choc

	2004	2003	2002
<b>Employees and contractors</b>			
Fatalities (number)	<b>0</b>	0	0
Number of lost-time incidents reportable under RIDDOR (> three days lost)	<b>0</b>	0	0
Number of dangerous occurrences reportable under RIDDOR	<b>0</b>	0	0
Number of manhours worked – employees	<b>94,036</b>	90,620	94,790
Number of manhours worked – contractors	<b>18,741</b>	12,979	17,377
<b>Members of public</b> (excluding employees and contractors)			
Accidents (number)	<b>0</b>	0	0

## Environmental Indicators – Barry Controls

	2004	2003	2002
<b>Manhours</b>	<b>97,000</b>	117,640	N/A
<b>Spillages</b>	<b>0</b>	0	N/A
<b>Waste</b> (tonnes per year)			
Waste production	<b>5</b>	5	N/A
<b>Hazardous</b>			
Disposal/treatment on-site	<b>0</b>	0	N/A
Disposal/treatment off-site	<b>0</b>	0	N/A
<b>Non-hazardous</b>			
Disposal/treatment on-site	<b>0</b>	0	N/A
Disposal/treatment off-site	<b>5</b>	5	N/A

N/A = Not Available.

## Health and Safety Indicators – Barry Controls

	2004	2003	2002
<b>Employees and contractors</b>			
Fatalities (number)	<b>0</b>	0	N/A
Number of lost-time incidents reportable under RIDDOR (> three days lost)	<b>0</b>	0	N/A
Number of dangerous occurrences reportable under RIDDOR	<b>0</b>	0	N/A
Number of manhours worked – employees and contractors	<b>97,000</b>	177,640	N/A
<b>Members of public</b> (excluding employees and contractors)			
Accidents (number)	<b>0</b>	0	N/A

N/A = Not Available.

## Environmental Indicators – Total Petrochemicals UK (Stalybridge)

	2004	2003	2002
<b>Overall production</b> (tonnes per year)	<b>73,133</b>	94,653	126,672
<b>Manhours</b>	<b>222,900</b>	283,100	290,200
<b>Aqueous effluents</b> (tonnes per year)			
Volume	<b>82,309</b>	80,717	70,430
Chemical oxygen demand (COD)	<b>3</b>	9.4	8.3
Suspended solids	<b>3.7</b>	2.6	1.8
Hydrocarbons	<b>0.11</b>	0.68	1.34
Metals (As + Cd + Cr + Hg + Pb and compounds)	<b>0</b>	0	0
Metals (Cu + Ni + Zn and compounds)	<b>0</b>	0	0
<b>Spillages</b>	<b>0</b>	0	0
<b>Air emissions</b> (tonnes per year)			
Volatile organic compounds (VOCs)	<b>7.1</b>	12.3	17.6
Carbon dioxide (CO <sub>2</sub> )	<b>2,139</b>	3,741	3,743
Nitrogen oxides (NO <sub>x</sub> )	<b>3.6</b>	7.4	4.9
Sulphur dioxide (SO <sub>2</sub> )	<b>0.0</b>	0.2	0.2
<b>Waste</b> (tonnes per year)			
Overall waste production	<b>570</b>	745	657
<b>Hazardous</b>			
Disposal/treatment on-site	<b>0</b>	0	0
Disposal/treatment off-site	<b>270</b>	449	298
<b>Non-hazardous</b>			
Disposal/treatment on-site	<b>0</b>	0	0
Disposal/treatment off-site	<b>0</b>	0	0
Recycled	<b>300</b>	296	359

## Health and Safety Indicators – Total Petrochemicals UK (Stalybridge)

	2004	2003	2002
<b>Employees and contractors</b>			
Fatalities (number)	<b>0</b>	0	0
Number of lost-time incidents reportable under RIDDOR (> three days lost)	<b>1</b>	2	0
Number of dangerous occurrences reportable under RIDDOR	<b>0</b>	0	2
Number of manhours worked – employees	<b>222,900</b>	283,100	290,200
Number of manhours worked – contractors	<b>6,600</b>	7,010	6,700
<b>Members of public</b> (excluding employees and contractors)			
Accidents (number)	<b>0</b>	0	0



### **Tell us what you think**

We have tried to be as open as possible about our activities, but if you would like any further information – or, perhaps, you have a comment or suggestion – then please do contact us, using the enclosed card. We welcome feedback.

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