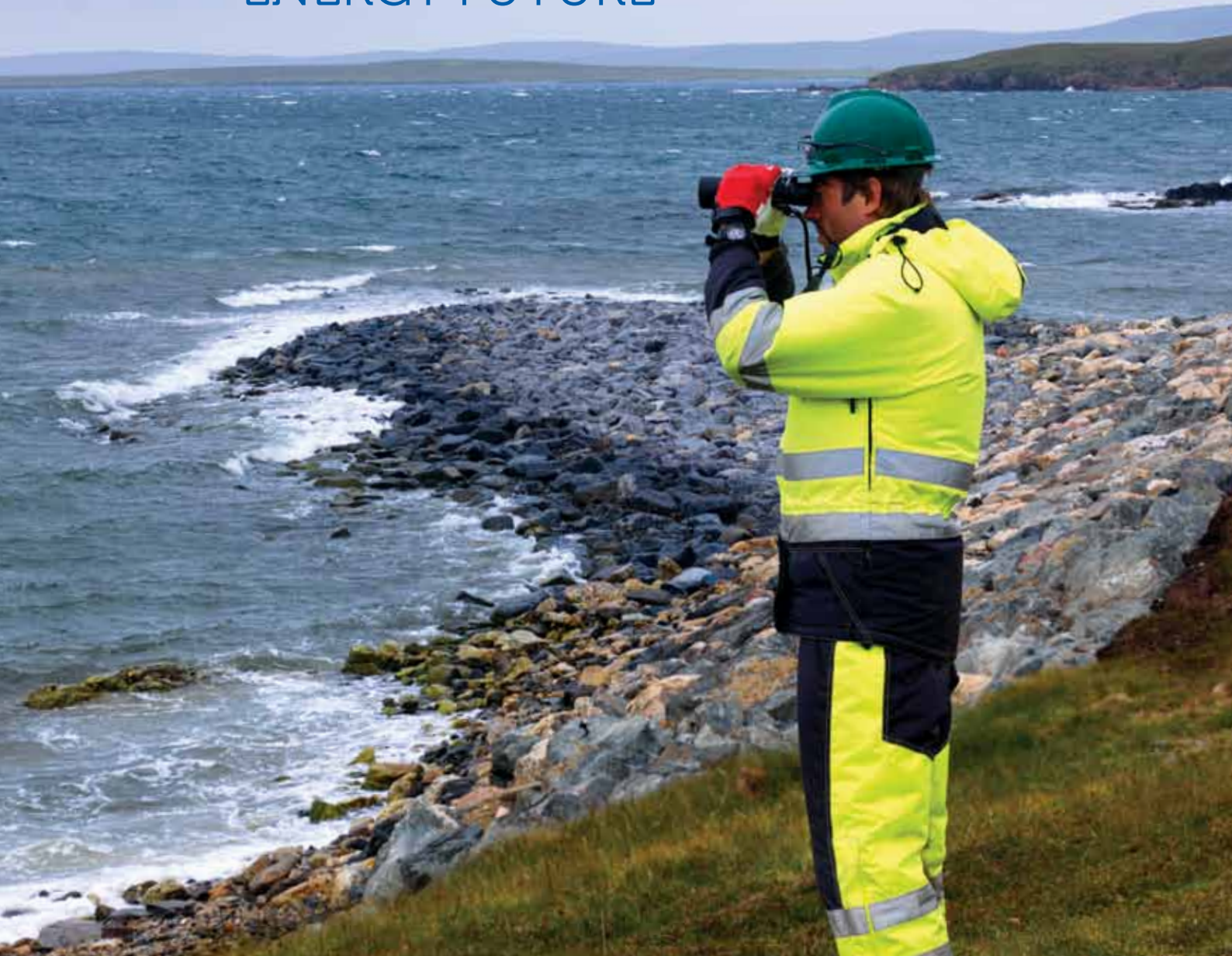




# INNOVATIVE SOLUTIONS FOR A BRIGHTER ENERGY FUTURE



UK ENVIRONMENT AND SOCIAL  
RESPONSIBILITY REPORT 2010

# TOTAL WORLDWIDE GROUP PROFILE

World's **5th largest** listed, integrated oil and gas company

Operations in over **130 countries**

Workforce  
**92,855**

Sales  
**€159,269 million**

Capital expenditure  
**€16,273 million**

Consolidated net income  
**€10,807 million**

## CONTENTS

UK Profile and Operations	01
Chairman's Foreword	02
Business Principles and Values	04
Managing Directors' Perspectives	06
Environment	10
Health and Safety	18
Our People	24
Our Community	27
Energy and Climate Change	33
UK Statistics	36
Contacts	48

### Front cover:

Working with the local community, authorities and specialists in the Shetland Islands.

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# UK PROFILE AND OPERATIONS

- £877 million in direct taxes
- £20 million in social security taxes
- £2.31 billion in excise duties paid
- £814 million in capital investment
- 11% of Total Group shares held in the UK, primarily by pension and other funds invested on behalf of savers and investors
- 580 million euros in dividends paid to UK shareholders in 2010

## TOTAL E&P UK

**£2.6 billion**

Turnover

**800**

Locally employed personnel

We are a leading producer of oil and gas on the UK Continental Shelf, operating more than 250,000 barrels of oil equivalent a day in 2010. Our proven and probable reserves at the end of 2010 were close to 800 million barrels of oil equivalent. Together with our affiliates, we own and operate Alwyn North, Dunbar, Ellon, Grant, Nuggets, Forvie, Jura in the Northern North Sea, together with St Fergus Gas

Terminal and associated pipelines. We also operate the Elgin, Franklin, West Franklin and Glenelg fields in the Central North Sea. TOTAL E&P UK (TEP UK) is one of the most active oil and gas operators in the UK where it continues to invest heavily. In addition to the Laggan-Tormore development in the West of Shetland area, TEP UK also launched in 2010 the Islay field and West Franklin Phase 2 developments.

## Total Gas & Power

**£11.2 billion**

Turnover

**426**

Employees

We are part of Total's Gas and New Energies division and we are one of Europe's leading energy traders and one of the world's foremost Liquefied Natural Gas shippers and traders. We are a shareholder in the South Hook Liquefied Natural Gas Terminal in Wales which is part of a wider Qatar liquefaction chain, helping to secure the supply of energy to the UK from non-indigenous resources. We are also a leading natural gas and electricity retailer with a share by volume

in excess of 20% of the Industrial and Commercial gas market (according to Cornwall Energy Consultants, April 2011). In 2010 we supplied gas and power to over 80,000 sites in the UK, supplying 51.3 Twhs of gas. We supply business, the public sector and gas for power generation. We supplied 4.1 Twhs of electricity to UK business consumers. We also sell and trade carbon dioxide credits on behalf of the Total Group.

## Total UK

**£5.1 billion**

Turnover

**3,532**

Employees

We have 810 Total-branded service stations in the UK and Total Butler, our fuel distribution subsidiary, is one of the largest in the UK. We distribute a wide range of products made at our Lindsey Oil Refinery by road, rail, sea and pipeline to terminals across the UK, the Isle of Man and the Channel Islands.

We sell a range of fuels including our advanced fuel range Total Excellium. We also sell aviation fuel, heavy fuel oil, heating oil, bitumen, lubricants, petroleum-based solvents and special fluids.

## Total Chemical Businesses in the UK

**£323 million**

Turnover

**1,030**

Employees

Our chemical companies are among the leaders in the UK and each one belongs to one of the Total Group's important chemical functions. In the UK, these companies are Atotech, Bostik, Cray Valley, Hutchinson and Total Petrochemicals which are involved in the manufacture of a wide range of products from

polystyrene to specialist products for both consumer and industrial use, including products for the construction industry, adhesives, electroplating and resins.

# CHAIRMAN'S FOREWORD



Patrice de Viviers  
Chairman,  
Total Holdings UK Limited

Total is a long-term partner of the UK, dedicated to meeting the increasing demand for energy both here and globally. Our commitment is most notably demonstrated through our long-term investment plan in the North Sea. We are applying our expertise and investing in cutting edge technology to unlock remaining reserves in the new frontier region West of Shetland. At the same time, we continue to invest heavily in exploration and develop new fields while maximising production from our existing assets.

In 2010 we launched three major projects on the United Kingdom Continental Shelf representing some £3.5bn investment. Our pioneering Laggan-Tormore project is the largest development which adds an important third hub to our existing portfolio alongside the Alwyn Area and Elgin/Franklin hubs. Our investments will continue to make an important contribution to the UK economy, secure future indigenous energy supplies for the UK and bring benefits to the local communities where we are present, including create jobs.

Our refining and marketing business has however been heavily impacted for some time by extremely challenging market conditions. Total made the decision to restructure some of its downstream assets and in 2010 launched two separate sale processes for a refining asset package centred around Lindsey Oil Refinery (LOR) and for some of its UK marketing assets. A Sale and Purchase Agreement for the marketing assets was entered into in June 2011 and the refining asset sale process is ongoing.

Our commitment to being a responsible corporate citizen never wavers and no matter what the challenges, all our businesses strive to achieve the highest safety standards possible. We have a zero tolerance policy in safety, health and environmental issues and continue to make progress, particularly in our offshore operations where we have significantly increased activity. As part of a worldwide initiative, we launched our 12 'Golden Rules' for safety at work across our UK businesses in 2010. Against this background of constant focus and improvement, we were all shocked and saddened by the death of one of our contractors at LOR during an accident in June 2010. LOR launched a full investigation and continue to assist the Health and Safety Executive's investigation.

Responsible environmental stewardship also remains at the heart of everything we do and a large number of our businesses made further progress towards improving their environmental performance, particularly in reducing spillages, waste and increasing recycling initiatives. We continue the trend of reducing overall emissions in the UK, making our products more environmentally friendly and assisting our customers with energy efficiency.

We are applying innovative solutions as part of our development of Laggan-Tormore. Together with the local community and authorities, we are preserving the peat covering the site of the planned gas plant in the Shetland Islands by building specially designed storage containers to enable the peat to be stored and then

reinstated at the end of the plant's working life. At the same time, a number of important previously unknown archaeological discoveries have been made around the site and we are working with specialists to restore and preserve this rich heritage for future generations.

We are proud to be part of the communities where we do business and continue to reinforce our links and add value. Our support and participation is wide and varied and I am pleased to report that many of our staff continue to give up their time to raise money locally for charity. Our partnership with the Young People's Trust for the Environment goes from strength to strength and over 25,000 young people around the UK took part in the Total Green School Awards in 2010.

I hope this report demonstrates to our stakeholders our openness and underlines our commitment to conducting our business in a socially responsible manner, securing both our own longer term success and the contribution we are making to secure energy supplies for the UK. Total is fortunate to have a high quality and committed workforce and I commend them all for their hard work and dedication.

A handwritten signature in black ink, appearing to read 'P de V'.

Patrice de Viviers  
Chairman, Total Holdings UK

**Three major projects for the UK Continental Shelf (UKCS) representing some £3.5 billion investment\***

- Securing future indigenous energy supplies to the UK
- Strengthening our presence and commitment to the UK through a long-term investment plan on the UKCS
- Applying our well established presence in the North Sea and our technological expertise to seek innovative solutions

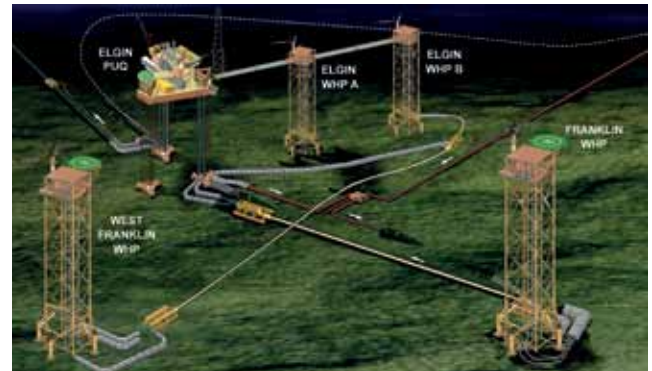
\*operated investment



Located some 125km north-west of the Shetland Islands, the Laggan and Tormore fields represent the future of the UK oil and gas industry

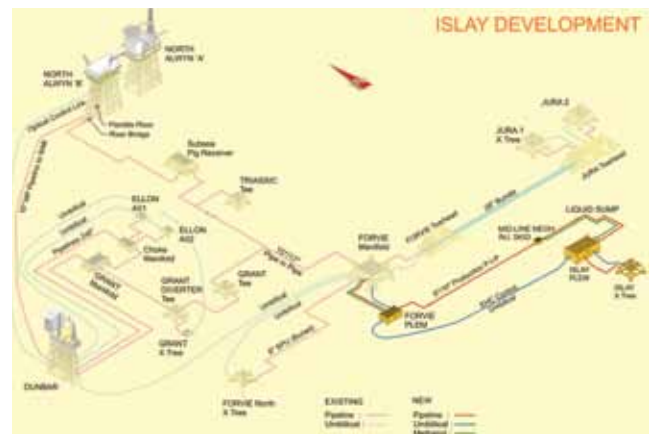
- Pioneering development opening up a new frontier region
- Unlocking the area's potential for further opportunities
- One of the largest infrastructure projects in recent years
- The fields contain more than 1 trillion cubic feet of gas, plus some condensate
- Total (80% interest) will develop Laggan-Tormore with partner, Dong (20% interest)
- First gas planned for 2014

[www.laggan-tormore.com](http://www.laggan-tormore.com)



**West Franklin Phase 2**

- Deepest, highest pressure/highest temperature field developed on the UKCS so far
- Aimed at accessing reserves currently estimated to be around 85 million barrels of oil equivalent (boe)
- First production expected in Q4 2013 and should reach 40,000 boe per day
- Extending the life of our Elgin/Franklin hub



**Islay**

- Subsea satellite of Alywn some 440 km north-east of Aberdeen
- Estimated reserves of near to 17 million barrels of oil equivalent
- Estimated peak production of 2.5 million standard cubic metres per day plus associated condensates

# BUSINESS PRINCIPLES AND VALUES

For Total, being a responsible company means demonstrating professional discipline and stringent ethical conduct, upholding our values and principles wherever we are and continuously striving to manage and reduce our impact on people and the environment. These requirements are set out in our corporate codes and charters and built into our management processes and systems.

## Our Values



Our ethical commitment is based on three core values – respect, accountability and exemplary behaviour.

### Our Code of Conduct

For 10 years, our entire organisation has been bound by Total's Code of Conduct which sets the parameters for our corporate and personal behaviour. Respect between colleagues at work, respect for human rights, anti-corruption, anti-fraud, respect for free competition and financial transparency are the focus of ongoing efforts and continuous improvement, cascaded at the local level through each business unit. Our Code of Conduct is based on major international reference documents,

including the Universal Declaration of Human Rights, the fundamental conventions of the International Labour Organisation (ILO), the OECD Guidelines for Multinational Enterprises and the principles of the United Nations Global Compact. To ensure our commitments are fully understood, the Code is translated into 24 languages and distributed throughout the 130 countries where we are present.

### Compliance with the Code

Compliance with the Code is monitored by Total's Ethics Committee which reports to senior management and is in charge of adapting and facilitating the ethics process at Total. In 2010, the Group's Ethics Committee provided advice on 73 referrals/questions from employees. This small number of cases reflects Total's policy of endeavouring to resolve issues locally prior to

escalation to the Group's Ethics Committee. In recognition of our engagement, Total was invited in late 2010 to join Global Compact LEAD, a select platform of companies dedicated to spearheading corporate sustainability.

### A Much Stronger Governance of Ethics and Human Rights Process

Three external partners help assess our practices and provide information and ideas on how we can make continuous improvements. Collaborative Learning Project, an expert in economic, social development and local community relations, has created a programme to assist multinationals pinpoint the affects of their activities in host regions. A new relationship established in 2010 with the Danish Institute for Human Rights, designed to help align training with our businesses and local

# RESPECT ACCOUNTABILITY EXEMPLARY BEHAVIOUR

Our three core values



The Total Group annually publishes its CSR performance initiatives <http://www.total.com/en/csr>



Available in 24 languages the Code of Conduct continues to be deployed

conditions particularly with regard to human rights and the supply chain. The GoodCorporation which assesses how our business units and subsidiaries comply with our Code of Conduct. These arrangements enable us to audit 12 to 14 subsidiaries/businesses a year and adopt new processes to further improve our compliance year on year.

#### A New Compliance Programme

In 2010 a new programme was introduced which is designed to expand on the principles previously set out in the Code that "Total rejects bribery and corruption in all forms, whether public or private, active or passive". Its purpose is to ensure compliance by Total affiliates as well as their employees with the Code of Conduct and applicable laws prohibiting bribery.

Its deployment is underway. The key elements of the programme are:

#### Top level commitment

Clear prohibition of bribery and corruption in all forms is endorsed by the top executive management.

#### Communication and training

Group-wide communication to raise awareness and provide appropriate training is aimed at targeted audiences. An e-learning on preventing corruption is mandatory for all managers and exposed disciplines (eg. finance, procurement...) worldwide. Dedicated training sessions are organised for compliance officers and lawyers.

#### Risk-based approach

Due diligence, appropriate risk identification and evaluation procedures are implemented in order to eliminate or adequately mitigate corruption risk.

#### Procedures

These include directives, compliance and business-line procedures and recommendations. Circulation of these internal rules and support for implementation of the compliance programme are monitored.

#### Sanctions

Disciplinary action is called for (up to and including dismissal) in proven cases of violation in accordance with the applicable laws, company policies and procedures.

#### Books and records

Reaffirmation that accurate and reasonably detailed records are to be maintained to properly reflect transactions; full internal controls are in place to monitor the accounting procedures.

#### Audit and Monitoring

Regular verifications on the implementation of the programme are to be undertaken through audits and internal controls.

#### Organisation

Implementation and supervision of the compliance programme are entrusted to the Group Chief Compliance Officer, supported by branch compliance officers and a network of local compliance officers.

The Chief Compliance Officer reports regularly to the Executive Committee and to the Board of Directors.

# MANAGING DIRECTORS' PERSPECTIVES



Peat conservation project  
as part of Laggan-Tormore



**TOTAL E&P UK**  
**Roland Festor**  
MD, TOTAL E&P UK Limited

## 6 million

Over 6 million man hours  
recorded in 2010

I am pleased to report that our three major projects – Laggan-Tormore, West Franklin Phase 2 and Islay are on target. Laggan-Tormore is an exciting and technically challenging third hub for Total in the West of Shetland area, where the UK Government estimates there to be about 17% of the UK's remaining reserves. We received all necessary sanctions and approvals and, together with our partner Dong Energy, we have started development work with first gas expected in 2014.

In addition, approval to develop Islay was received from the UK and Norwegian governments and first gas is expected in 2011. We are investing some £3.5 billion in securing future resources of energy for the UK. We are also preparing for the future with six new blocks awarded in the 26th round of oil and gas exploration licences awarded by DECC.

Together with our normal operations, these projects have required over six million man hours to be worked in 2010, which is a significant increase in activity. I am pleased to report that this has been achieved with fewer lost time incidents than the previous year.

As always, safety and the protection of the environment remain our top priorities and we are committed to ensuring the highest standards apply to all our operations. You will see in this report the work done with the Oil Spill Response and Advisory Group's review of industry practices following the events in the Gulf of Mexico. We also include the innovative work we have been carrying out on peat conservation in Shetland and the environmental protection work we have undertaken at all our sites.



**Total Gas & Power**  
**Philippe Sauquet**  
CEO, Total Gas  
& Power Limited

We have two important commercial responsibilities. The first is to successfully manage the trade of Total's global gas output on a worldwide basis. The second is to supply gas and electricity to over 80,000 customer sites in the UK, where we are a leading gas supplier with a share in excess of 20% of the Industrial and Commercial market. Our aim is to continue to develop the expertise of our teams in both these key areas.

2010 has been a year of progress. We have increased our energy supply market share and we have also moved forward in our new Energy Services activity. We are focusing on promoting to our customers and others energy efficient technologies such as Automated Meter Reading (AMR) technology and services and cost optimisation solutions

60,000 tonnes

We estimate that the 8,000 AMR's we have installed to date have saved customers sufficient energy to have reduced their combined CO<sub>2</sub> output by about 60,000 tonnes.

20%

We have increased our share of the Industrial and Commercial gas market to in excess of 20%

with embedded generation. We estimate that the 8,000 AMR's installed to date have saved customers sufficient energy to have reduced their combined CO<sub>2</sub> output by about 60,000 tonnes. In June 2010, our AMR service was accredited under the 'Total Eco-Solutions' program.

Whilst continuing to manage our activities, we keep in mind our corporate social responsibilities which we take seriously. As well as promoting energy efficiency, we focus on being efficient ourselves and reducing waste at our sites through segregating and recycling and we are ISO 14001 compliant. We have implemented a charity policy across our UK operations to support our objectives in this area with our local communities and staff volunteering. A committee has been set up which meets four times a year.



**Lindsey Oil Refinery**  
**Nigel Tranter**  
General Manager,  
Lindsey Oil Refinery

We are committed to running a safe and efficient refinery which supports our community and provides local employment. We recognise the importance of the role we can play in developing and enhancing our environmental and safety management systems for the benefit of all.

Over the course of the last year, we have made significant improvements to our environmental controls. We have, for example, adopted the use of thermal desorption in place of incineration for the disposal of some of our waste material and we were able to lower SO<sub>2</sub> emissions by using more natural gas in our refinery processes.

Despite the extremely difficult economic conditions, we continue to invest in new technology. During 2010, we made good progress on both the HDS-3 plant (low sulphur diesel production) and the bio-ethanol injection plant. Both these plants will be commissioned in 2011.

We have also invested considerable time in developing our health and safety management systems, with a particular focus on understanding and improving the way in which each of us carries out our personal safety management roles and responsibilities. We have also committed significant resources to improve asset integrity and inspection.

Against this background of improvement and investment everyone at the refinery was shocked and saddened by the tragic death of one of our contractors on 29 June 2010. Whilst we continue to assist the Health and Safety Executive's investigations, we are committed to learning lessons and enhancing our safety management systems still further in our continued drive to improve safety and sustainability.

We place a high priority on corporate social responsibility and we continue to play an active role in the local community through our support for charities, education and the environment.

## MANAGING DIRECTORS' PERSPECTIVES CONTINUED



**Total UK**  
**Didier Harel**  
MD, Total UK Limited

Total UK once again faced extremely challenging economic conditions in 2010 and everyone in the company worked exceptionally hard to steer the organisation through the year. We are fortunate to have a high quality and committed workforce which, in the face of these conditions, has been fully involved in generating ideas to cut operating costs as part of our innovative 'action for recovery programme'. Throughout the year, we relentlessly worked towards strengthening our health, safety and environmental culture and to support the communities in which we do business.

We successfully introduced the Total Golden Rules across the businesses in

2010 as part of our constant focus on safety. In prioritising our concern for the environment, we have significantly reduced the number of spills at our depots and at customers' sites by introducing training programmes and systematically promoting customer involvement. We also introduced comprehensive waste segregation in our offices.

Our support for the communities in which we do business continued with a number of programmes. The Watford Football Club Sports and Educational Trust is greatly valued by the community where our headquarters is based and we also continued our involvement in the community around Buncefield by working closely with the Dacorum Community Trust. We once again ran the 'Total Little Learners' road safety campaign aimed at children under the age of six, supported the CLIC Sargent children's cancer charity

and promoted the Total Green School Awards in association with the Young People's Trust for the Environment.

In the life of any large corporate business such as the Total group of companies in the UK, longer term strategic decisions are made from time to time that can have a substantial impact on some of the business segments.

In our case, the decision was taken in 2010 to launch two separate asset sale processes, both for the refinery and associated business units, and for some of our marketing assets. The latter include the retail network, our Total Butler heating oil business, the associated logistics infrastructure, as well as our Channel Islands and Isle of Man businesses. Despite the daunting challenges that this has created, we have remained fully committed to our customers, our employees and our other stakeholders throughout the UK.



**Total**  
**Petrochemicals UK**  
**Andrew Ritchie**  
MD, Total Petrochemicals UK Limited

In 2010 we produced and sold record levels of polystyrene in difficult market conditions, with no lost time accidents and no environmental incidents. This was our objective and we were pleased to achieve it.

We provide continuity of employment in an area in which we are one of the larger employers, with more than 90 people directly engaged by the company. We carried out corporate social activities which included supporting charities in the area, sponsoring local schools in promoting science based careers and participating in the Total Green School Awards.

**// We provide continuity of employment in an area in which we are one of the larger employers //**

We are committed to developing our staff through appropriate and thorough training. This was recognised with an award from Chemicals North West in the year. Making training available to all members of staff, from safety courses through to sponsoring staff to take university degrees, is not only our responsibility but also essential to achieving business success.

We are committed to producing high quality products and to supplying them on time and at a competitive price. We aim to do this with no accidents and no adverse effects on the environment.

In order to sustain our activities in the long term, we set high standards for safety, for our products and for our community involvement.



**Bostik**  
**Tony Davison**  
MD, Bostik Limited

Bostik is heavily dependent on the construction industry and, when that goes through difficult times, then so do the companies that supply it.

Whilst 2010 was better than 2009 many challenges remain, but market conditions must never allow us to change our priorities. Safety and the environment are always at the top of our list and we continue to invest and improve in these two key areas. Through this continual effort, we are recognised as being a leader in safety by the rest of the Bostik Group in Europe. A re-emphasis on safety through a new campaign has led to a significant reduction in incidents in the year and enabled us to continue an annual downward trend in the number of incidents and near misses from an already good level.

Our work on environmental protection carries on with not only reducing emissions from the production processes, but also in reformulating a number of our products to be safer for the environment. This involves product development, improvement, materials evaluation and testing, all of which we carry out ourselves in our own research and development laboratories.

We also place a high priority on training and encourage all our employees to take up appropriate courses of study and gain qualifications. We took on three apprentices in the year and we plan to expand our apprenticeship scheme in the future. Finally, we have taken our community involvement to a new level in the year by sponsoring the Northern Premier Football League, the "Evo-Stik League", and we look forward to a successful association with the League in the future.

**// Safety and the environment are always at the top of our list and we continue to invest and improve in these two key areas //**

**// This innovative new technology will not only bring greater efficiency, but will also improve environmental conditions in our global infrastructure //**



**Pamargan**  
**Mark Pace-Bonello**  
MD, Pamargan Products Limited

Although we experienced some very difficult trading conditions in previous years, 2010 showed a significant improvement and we are delighted to say that Pamargan remains a world leader in its field. We carry out research and development in the UK while our manufacturing capability is split with our subsidiary outside the UK.

We have been developing the unique Pamargan Flange Seal which, after a rigorous testing programme, is showing great potential for a wide range of applications. This innovative new technology will not only bring greater efficiency, but will also improve environmental conditions in our global infrastructure. We are actively promoting its use in oil and gas, utilities and fluid transport systems.

Health and safety permeates everything that we do and we recorded zero lost time incidents in 2010. Environmental protection is another important priority and we further improved our waste segregation despite the relatively small total volumes involved. We constantly look for ways to improve production and energy efficiency. We have fitted variable speed drives on our air compressors, power factor correction equipment and half hourly electricity meters as part of a continuing programme of improvement. We have made charitable donations and contributions to local charities and sports clubs, as well as providing work experience opportunities for nearby schools.

# ENVIRONMENT



We are committed to conducting our business responsibly and we set ourselves demanding targets reflecting already robust legislation. The past year has seen further progress in our ongoing efforts to reduce our environmental impact.

## Waste Management

**W**aste management is a key environmental challenge facing industry and we remain committed to reducing and managing waste responsibly across all our sites.

TOTAL E&P UK (TEP UK) strives to move waste up the waste management hierarchy wherever possible, using landfill only as a last resort. TEP UK's 'Waste Watch' initiative highlights the 'Reduce, Re-use and Recycle' message, resulting in improved resource management. TEP UK emphasises this message by working closely with numerous organisations to identify sustainable uses for waste streams whilst supporting meaningful good causes and community initiatives.

Offshore waste management is particularly challenging because of limited storage space, however our offshore

teams have excelled in waste segregation. TEP UK monitors the percentage of recyclable items found in waste destined for landfill and the results are used as a Key Performance Indicator for all of our teams both on and offshore. The overall waste segregation efficiency in 2010 was 85%.

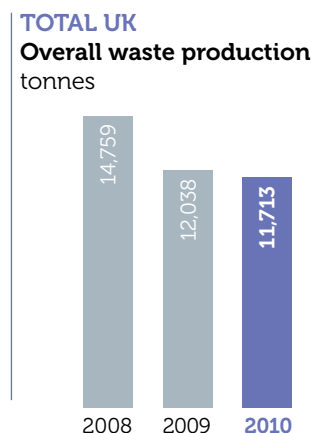
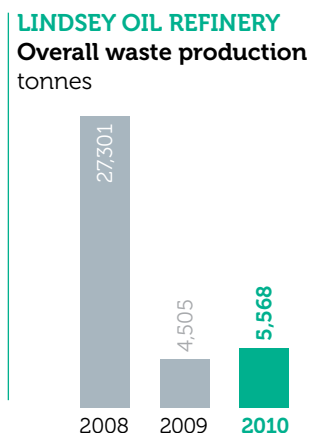
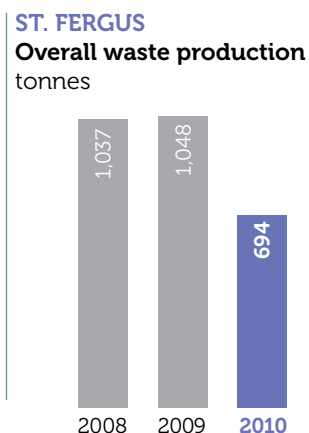
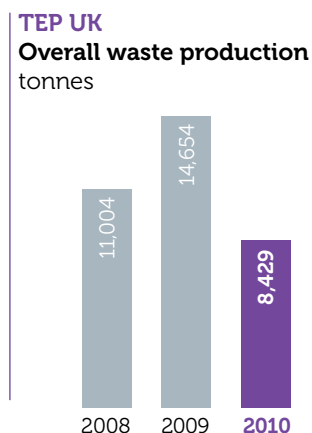
At the same time each installation has a Safety, Health and Environment (SHE) Committee, involving personnel at all levels who meet regularly to discuss a wide range of environmental issues and agree on ways in which TEP UK can make improvements. A strong environmental culture has been developed which encourages all site personnel to consider innovative ways of managing particular waste streams.

As part of TEP UK's continuing drive to handle waste effectively and reduce the amount sent to landfill, over 12 tonnes of food waste from the kitchens at our Aberdeen offices and the St Fergus Gas Terminal has been composted in 2010 by a local recycling company.

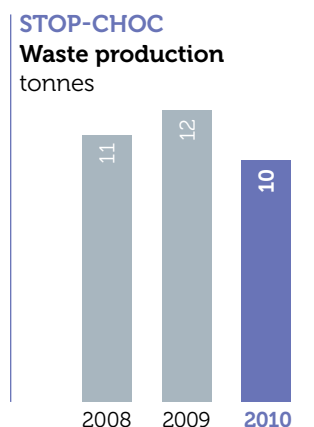
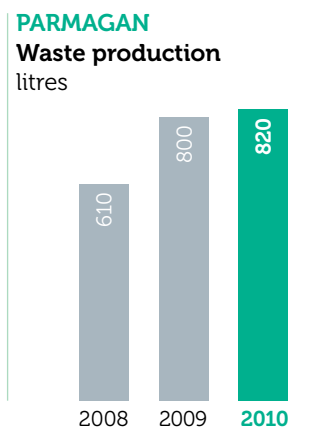
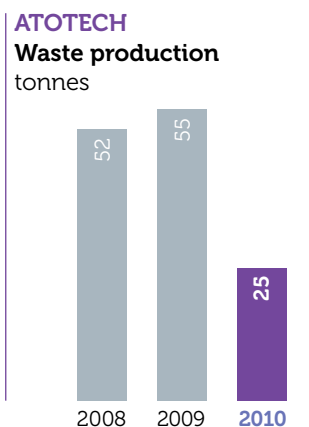
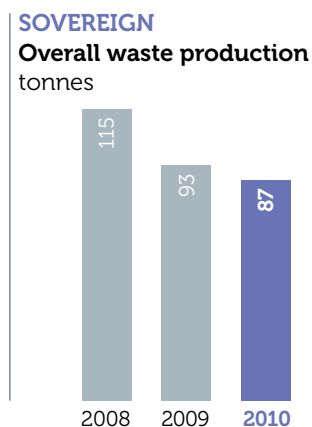
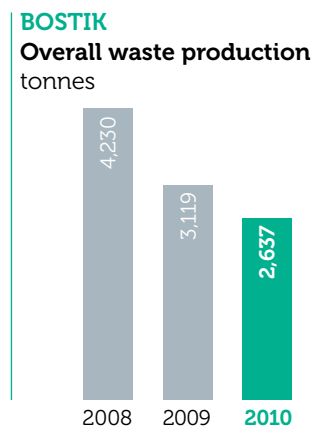


St Fergus has a pro-active approach to handling waste and has formed a partnership with a local recycling company (Keenan Recycling) which converts food waste into compost

All Total businesses in the UK adopt robust waste management policies underpinned by a 3 step approach: Reduce, Re-use, Recycle. A large number of our sites are achieving improvements in reducing waste.



“Reduce,  
Re-use  
Recycle”



## ENVIRONMENT CONTINUED

St Fergus was shortlisted for the 2010 European Business Awards for the Environment (EBAE) in recognition of its environmental stewardship and a presentation explaining St Fergus's approach to the environment was given in London to the Royal Society of Arts.

Once again, TEP UK supported the Fishing for Litter (Scotland) project, coordinated by KIMO the international marine environmental organisation. It is a scheme that encourages fishermen to collect litter caught as part of their normal fishing activities and bring it to shore for recycling or disposal. Over 215 tonnes of rubbish has been removed from the waters off Scotland since the scheme began.

Following a review by its internal Environment Committee, Total UK implemented systems to further reduce waste at its sites. In 2010 the amount of waste being recycled rose from 79% to 91% in the Watford offices and the company held a 'Green Office' week to coincide with World Environment Day. Total UK presents its environmental indicators to its Board of Directors every month. It is still the only oil company in the UK to have an Operating Agreement with the Environment Agency.

Lindsey Oil Refinery (LOR) also increased the amount of waste it recycled by adopting thermal desorption processing to dispose of sludge waste. Thermal desorption is an environmental remediation technique that utilises heat to increase the volatility of contaminants so that they can be separated thermally. There are two useful by-products from the process. The first is recovered oil and the second is dry residue that can be reused as aggregate in concrete.

Staff at Total Gas & Power's offices in London, Leeds and Redhill increased their efforts in recycling initiatives (22.8 tonnes of paper and cardboard, 250 kg of aluminium cans, 796 kg of plastic bottles, 190 kg of plastic cups and 134 printer toner cartridges).

Within our chemical businesses, Total Petrochemicals continued to operate its site waste plan. Although the amount of hazardous waste increased in 2010, this was due to higher production levels and the company adopting best practice by widening its definition of hazardous waste to include empty hazardous chemical bags. However, by incinerating over 80% of its hazardous waste, 45% less is now sent to landfill, which is a significant improvement in the way this category of waste is disposed of.



TEP UK supports Fishing for Litter (Scotland) project

# 70%

A new flash distillation unit installed by Total Petrochemicals will reduce the quantity of slops to be removed by road tanker by 70%

# 15%

Bostik reduced its overall waste output by 15%

# 91%

Total UK recycled 91% of its waste in the Watford offices

# 2,000kg

Bostik reduced 2,000 kg of waste in its Leicester factory

# 23.7%

Cray Valley reduced non-hazardous waste output by 23.7%

# 4,352 tonnes

Cray Valley upgraded its heat generator in the year and reduced CO<sub>2</sub> from 5,142 tonnes in 2009 to 4,352 tonnes in 2010

The innovative 'post-consumer' waste programme continued with recycled polystyrene from electrical equipment being used in flame retardant compounds produced by the plant. A by-product of polystyrene production is a solution of styrene, dyes, waxes, etc known as 'slops', which have to be removed from the factory for safe disposal by road tankers carrying about 22,000 litres on each journey. A new flash distillation unit, which will reduce by 70% the quantity of slops to be removed by road tanker, was authorised in 2010. Installation planned for 2011.

Bostik reduced its overall waste output by 15%, well over the 10% per annum reduction target set under the terms of its five year waste minimisation plan. Hazardous waste fell from 480 tonnes in 2009 to 446 tonnes and non-hazardous waste was reduced by 13%. The company also reduced 2,000 kg of waste in its Leicester factory by changing a production method following a suggestion from its employees.

Cray Valley introduced separate skips to segregate scrap metal, plastic, cardboard, paper and non-hazardous general waste and reduced waste output by 23.7%. Over 13 tonnes of office waste was also recycled.

Pamargan also introduced waste segregation by using separate skips for plastic, metals and cardboard. It obtained certificates from its waste disposal contractors to show that it was disposed of correctly.



Bostik finds innovative ways to make insulating glass sealing products more environmentally friendly

Waste is also segregated at Sovereign Chemicals with waste streams recycled wherever possible. Stop-choc's most common waste is trimmings from rubber mouldings which are segregated and completely recycled.

### Reducing Emissions

An unavoidable consequence of oil and gas production is the generation of water containing small traces of oil, so called 'produced water'. TEP UK continues to work hard on its Produced Water Re-injection System on the North Alwyn platform to bring environmental improvements. A significant reduction in the total mass of oil discharged in produced water under permit has been made in recent years. In 2010 TEP UK discharged just over two tonnes of oil in produced water from North Alwyn (compared to 21 tonnes in 2008).

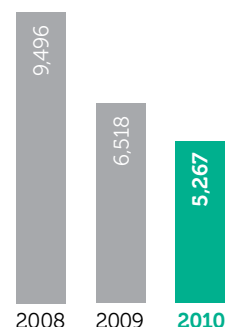
Water and air emissions at LOR were lower due to reduced production, partly as a consequence of the economic climate and partly because of the fire at the refinery in June 2010. All water used to extinguish the fire was successfully contained and treated in the waste water treatment plant before being returned to natural water courses. LOR has also emitted less SO<sub>2</sub> by burning more gas and less oil.

Cray Valley upgraded its heat generator in 2010 and reduced CO<sub>2</sub> from 5,142 tonnes in 2009 to 4,352 tonnes. The company also tests surface water daily and measures air quality weekly.

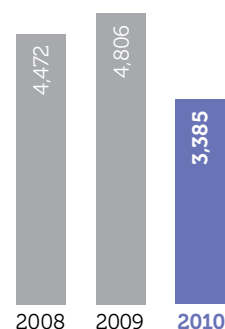
Total Petrochemicals endeavours to ensure that all discharged water is fully compliant with the Integrated Pollution Prevention Control framework. An organic carbon analyser was purchased in 2010 to take samples of the water flow after it leaves the water discharge filters and before it enters the natural water system. This allows compounds to be measured more effectively and improves the efficiency of filter changes. The installation of a number of smart water meters to enable localised monitoring of water use around the plant has contributed to reduced water consumption. A tertiary fire water protection barrier was installed to prevent water entering the natural waterways surrounding the plant.

## Emissions to air from industrial activity

### SO<sub>2</sub> EMISSIONS SO<sub>2</sub>: Sulphur dioxide tonnes



### NO<sub>x</sub> EMISSIONS NO<sub>x</sub>: Nitrogen oxides tonnes



### VOC EMISSIONS VOC: Volatile organic compounds tonnes



## ENVIRONMENT CONTINUED



Bostik's Research & Development laboratory developed a number of innovations in 2010 intended to make its products safer for the environment and to reduce waste. For example, a water based damp-proof membrane provides a more environmentally friendly alternative to the previous solvent based epoxy product. The company also re-formulated its 'Supersol' white reflective coating product to lower its volatile organic compounds content and replaced 50% of butyl rubber content in its insulating glass sealing product, Sealomelt, with recycled rubber. Pamargan installed a variable drive on its air compressors so that the motor operation is linked to demand in order to reduce power consumption and related emissions.

### Spill Prevention

Any spillage is of concern to us and every effort is taken to prevent or, if they occur, limit spills as far as possible. Progress is being made, despite some oil and chemical spillages reported in 2010. Each occurrence has been investigated, lessons are learned and actions taken so that we can enhance our systems and training.

Total UK reduced its number of spillages of over 10 litres from 72 in 2009 to 50 in 2010 and the company continued with its programme of driver training. In addition, a great amount of work has been done with customers to raise awareness about our delivery procedures and the importance of maintaining storage facilities and associated gauging equipment correctly. Total UK's bitumen plant in Preston has been working with the Refined Bitumen Association to produce a set of best practice guidelines regarding the delivery of its product.

TEP UK reported a number of very small oil spots observed on the surface of the sea. These were all reported as spills using the DECC Petroleum Operations Notice procedure, although the quantity of oil discharged was very low. In addition, there were a number of chemical spills in the year. Of these, five incidents resulted in greater than two tonnes of chemical accidentally being discharged to sea. Four of those incidents involved the discharge of hydraulic fluid following failures of subsea equipment and one was a spillage of methanol. Each incident has been thoroughly investigated and significant investment has been made to improve equipment and systems.

### Decommissioning and Remediation

TEP UK successfully completed decommissioning the MCP-01 platform in the North Sea in 2010. Significant quantities of steel were recovered for recycling and all fuel, equipment and chemicals have been removed. As approved by the regulatory authorities, the concrete structure remains in place and is now used as a navigation beacon (maintained by Total) and provides a valuable habitat for marine life.

Total UK sold three former Butler distribution sites in 2010 which had been fully remediated to enable redevelopment to take place. Remediation work continues at the disused industrial site at Rye Harbour in Sussex, and at the former Langley fuel storage terminal in Berkshire. The former Leeds site has now been fully remediated to the Environment Agency's satisfaction.





Bostik successfully completed the decommissioning of its Chester factory in 2010. The plant shutdown took place in February with all chemicals and equipment being removed by July. The site is now for sale.

### Safety of Our Deep-Offshore Operations

Throughout our operations we keep in mind the tragic events in the Gulf of Mexico and we are reminded once again that both safety and the environment must remain our primary concern. It is our aim, together with industry and regulators, to learn all lessons from these events and to support improvements. The Total Group set up its own task forces and immediately launched a complete review of its procedures and practices across its drilling operations. Total also participates in various task forces set up by the International Association of Oil & Gas Producers. Whilst we continue to maintain faith in the strong and robust regulatory system in the North Sea and in our own procedures and operations, we nevertheless played our part in the UK in the response to the Macondo incident.



TEP UK has been actively working with, and giving full support to, the UK's Oil Spill Prevention and Response Advisory Group (OSPRAG). OSPRAG is made up of representatives from field operators, drilling contractors, the Department for Energy and Climate Change, the Health and Safety Executive (HSE), trade unions, the Maritime and Coastguard Agency, and the Secretary of State's representative. The company has also been reviewing and reinforcing its own emergency response procedures, including training requirements, from high level crisis team members to on-site emergency responders. In addition, it has reviewed and updated its Oil Pollution Emergency Plans which are regularly tested through on-site spill response drills and company exercises.

### Accreditation

Our industrial operations all maintained ISO 14001 environmental management standard in 2010. Total UK, LOR, Total Gas & Power (Redhill), Total Petrochemicals, Bostik and Atotech maintained ISO 9001 (quality management) accreditation and Total UK, Total Petrochemicals, Cray Valley OHSAS 18001 (safety management). In addition, St Fergus was also successfully verified against the Eco-Management & Audit Scheme, a voluntary initiative recognising organisations that go beyond minimum legal compliance and continuously improve their environmental performance.

# Total Green School Awards

Celebrity Steve Backshall – Adventurer, Natural History Presenter and President of YPTE – presents UK National Champions Pilling St John's Primary School with their prize at London Zoo



The Total Green School Awards, our national initiative for primary school children, encouraged even more young people to take a proactive interest in the natural environment and the need for sustainability.

The awards, run by Young People's Trust for the Environment, saw over 25,000 young people taking part across the UK with 360 projects submitted in 2010.

**A** group of young people from Pilling St John's Primary School in Lancashire were crowned UK national winners at the national award ceremony, London Zoo, for their excellent project "The Pilling Coral Reef". Head teacher, Pauline Tate, said "the project had everything; cross curricular learning, care for the environment, community involvement and even fundraising."

The Green School Awards allow Total businesses around the UK to encourage their local schools to participate, such as Total's Bitumen business, a close neighbour and supporter of Pilling St John's Primary. Mike Linley, General Manager, said "I have visited the school for several years and I am always impressed by the work the children do for the awards. Their knowledge and creativity is outstanding and, with the support of their teachers, they are able to explore complex environmental issues whilst having enormous fun."

Peter Littlewood, Director of Young People's Trust for the Environment said "the relationship between YPTE and Total has developed into a true partnership with both organisations reaping the benefits from our mutual association".

2010 regional finalists were Pilling St John's C of E Primary (North); Castle Park Primary (Wales/West); Saint Matthew's C of E Primary (South/Central); Knockbreck Primary (Scotland).

[www.totalgreenschoolawards.org](http://www.totalgreenschoolawards.org)

/// the projects had everything; cross curricular learning, care for the environment, community involvement and even fundraising. ///

Pauline Tate Head teacher



Scottish regional winners, Knockbreck Primary School, Tain, receive their prize from celebrities Mark Beaumont and Heather Reid OBE at Glasgow Science Centre for their enterprising project providing bird feeders for the school community

# HEALTH AND SAFETY



Safety remains of paramount importance within Total. We believe in a strong safety culture through leadership from management and supervisors, workforce involvement, personal responsibility, openness and cooperation. As part of a worldwide initiative, we launched our 12 'Golden Rules' for safety at work across our UK businesses in 2010.



## The Golden Rules

High-risk situations

Traffic

Body mechanics and tools

Protective equipment

Work permits

Lifting operations

Powered systems

Confined spaces

Excavation work

Work at height

Change management

Simultaneous operations and co-activities

**T**he Golden Rules are designed to raise awareness of the importance of adopting the appropriate procedures and working practices that are at the heart of our safety culture. The intention is for everyone to take ownership of the rules and apply them everywhere, at all times. Strict compliance is essential because safety is everybody's business and, to be effective, there must be education, discipline and the courage to step in as soon as something is seen to be wrong.

These rules, based on experience, feedback and lessons learned, encompass the situations most frequently encountered whether offshore, at our refinery, chemical plant or part of our transport activities. They must be adhered to before starting any work and are mandatory for all employees, contractors and visitors.

The principles of dynamic risk assessment must be applied by everybody concerned. All persons must understand that their acts/



behaviours may create risk for themselves, colleagues, facilities or the environment. All incidents, near misses and downgraded situations must be reported as soon as possible and, if compliance with the Golden Rules is not possible or anybody is not sure of how to proceed, then work must stop and the matter must be reported immediately.

**TOTAL E&P UK (TEP UK)**

**Improving Performance:** the Lost Time Injury (LTI) and Total Recordable Injury Rate (TRIR – the Total Group’s preferred indicator for measuring the number of occupational incidents) for 2010 improved over 2009. The number of High Potential Incidents (HIPO) was also down. The TRIR was 4.3 per million man hours worked (from 5.7 million in 2009), and Alwyn and Elgin achieved 500 days without an LTI. This information is particularly important when viewed in the context of man hours worked.

Over 6.9 million man hours were recorded in TEP UK in 2010. This higher level of activity (in addition to its normal

operations) was as a result of its long-term investment plan in the North Sea associated with the new Laggan-Tormore project and new discoveries around its existing hubs (West Franklin and Islay developments).

**Reducing Risk:** a behavioural safety campaign called ‘Think Safe’ was run during the year. Beginning with a film and a set of posters, it was designed to encourage thought and debate about safety through promoting the three strands of ‘know-how, cooperation and choice’. Following last year’s extensive Safety, Health and Environment (SHE) culture survey, a series of supervisors’ safety seminars were given involving the Managing Director. These were run for both staff and contractors in the format of the television programme ‘Who wants to be a Millionaire?’ with the Managing Director in the ‘hot seat’. A series of hypothetical questions were put to him which stimulated valuable debate and learning in a relaxed atmosphere. An essential part of any safety programme is good communication and a number of toolbox talks were also held concentrating on this theme.

**Asset Integrity:** We continue to make significant investment on maintenance and upgrades. For example, the Dunbar upgrade was completed as part of the cross site upgrade project which ensures our facilities offshore are maintained to the highest standards. We are also enabling better visibility of the status of integrity of safety critical equipment (SCE) through improvements in the reporting of our maintenance activities. A system for reporting the status of all planned and corrective maintenance on our SCEs is already in place. The results can also be linked to a ‘traffic lights’ report which gives the true status of corrective and planned maintenance.

**Competence:** the Competence Assurance Management System (CAMS) has now been officially accredited by OPITO, the UK oil and gas training and competency organisation, following a four day audit. This is the first system of its type adopted by a major oil and gas operator in the North Sea to be recognised in this way.

## HEALTH AND SAFETY CONTINUED



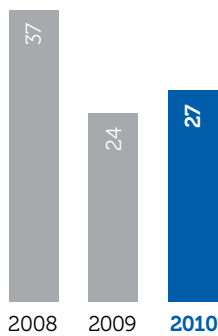
CAMS has now been implemented at all offshore locations and at St Fergus and will be extended to drilling and well services in 2011. It will also be used on Laggan-Tormore. CAMS is based on a full competency analysis of every job performed at a site or installation conducted under OPITO Company Management System (CMS) guidelines. The aim is to concentrate on specific requirements and reviews are carried out by trained assessors observing normal work as it is performed. CAMS identifies any gap in skills and appropriate training is put in place as quickly as possible. The system enables individuals to monitor and continuously demonstrate their competency against their own competency profile. Contractors are also required to adopt systems and procedures that equal the TEP UK CAMS standard.

**Thorough Review:** TEP UK continued the 'Thorough Review' that was started in 2009 with the review of the Alwyn Safety Case following the amendments to the Offshore Installations (Safety Case) Regulations. In 2010 the Elgin-Franklin and Dunbar reviews were conducted and involved a rigorous examination of working and functions with participation from engineering, technical and operational personnel, asset integrity experts and senior managers.

**Total UK** improved its safety performance in 2010. There were 21 TRIR incidents compared to 26 in 2009. The company set a target for 2010 of 2.95 incidents per million man hours worked and it achieved 2.74, with a further 10% reduction on this figure having been set for 2011.

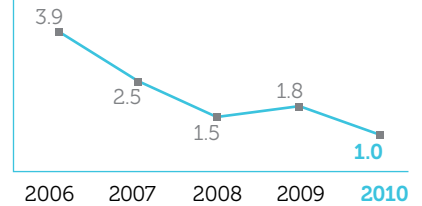
Monthly tool box talks have been introduced within all parts of the business to reinforce our Golden Rules and principles of Dynamic Risk Assessment.

## LTIs (Overall) Reportable under RIDDOR

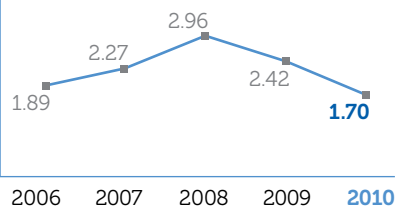


The increase in LTIs overall across UK businesses was due largely to an incident at LOR. LTI frequency rates at our other larger businesses, however, continue to show a downward trend (some with significantly increased activity in recent years).

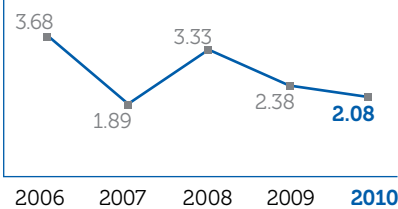
## TEP UK



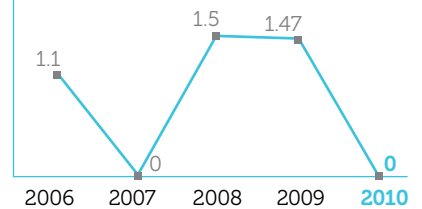
## Bostik



## Total UK



## Total Petrochemicals



The occupational driving and car standard was updated to incorporate additional measures based on equipment, behaviour and checks on compliance. For example, all cars used on company business must now be built to a minimum European New Car Assessment Programme 4 rating; driver training has been enhanced; and a maximum weekly mileage has now been introduced to sit alongside existing driving distance and duration limits.

The company held its first contractor awards event in 2010. Business units nominated contractors who had demonstrated outstanding safety culture and good working practices. The overall Best Contractor award was presented to a contractor from the bitumen plant in Preston. On the same day, tool box talks took place within the various business units where discussion centred around learnings from past incidents and near misses. Contractors were also invited to participate in these discussions.

The company continued to work closely with industry and regulatory organisations such as the Process Safety Leadership Group and has continued to implement the recommendations, including reviewing all secondary and tertiary containment measures at storage sites. An important aspect of this is the continual review of process safety to make sure that best practice in the industry is rigorously maintained. This includes leadership, risk and hazard assessment, competences, emergency response, asset integrity and the management of contractors.

A comprehensive set of Key Performance Indicators has been drawn up to ensure adequate monitoring of safety critical measures and the results are reported to the Board of Directors every month.

Significant work has also been done in terms of functional safety to ensure that key safety instrumented systems are, and remain, fit for purpose.

## Lindsey Oil Refinery (LOR)

In June 2010, there was a loss of containment during maintenance work at the refinery that resulted in a fire in which one of our contractors sadly died and another was injured. We deeply regret this tragic loss and we are committed to ensuring that nothing similar can occur in the future. We have conducted an internal enquiry into the incident and we will continue to support the HSE which is conducting its own investigation.

LOR continues to spend considerable time and resources on the development of best practices in safety across the refinery. COMAH (Control of Major Accident Hazards) continues to receive specific focus including our ongoing review of the CAMS and the assessment of human reliability for the various safety critical tasks.

## HEALTH AND SAFETY CONTINUED



Additionally, an ALARP (As Low As Reasonably Practicable) risk demonstration for all the processing units and the storage and distribution areas of the refinery has been undertaken and is nearing completion. We have recently created a new position, dedicated to monitoring and measuring critical aspects of safety, environment and quality management performance.

**Total Petrochemicals** finalised its process safety quantitative risk assessment of people both on and off its site and will discuss the results with neighbouring businesses. It also introduced the requirement for all managers, shift managers and supervisors to be trained to level 2 of the National Examination Board in Occupational Safety and Health (NEBOSH). Full training was carried out and will continue.

In addition, the company introduced its 'Ensure Safe Transport' scheme. All the company's finished products are transported by road vehicle and the new scheme makes sure that all vehicles and trailers are fit for purpose ensuring that relevant weights and loads are clearly and correctly marked. All staff involved in vehicle handling are trained to NVQ level 2 and are authorised to reject unsuitable vehicles. An improved lanyard system was introduced for staff and contractors to prevent falls. A new smart scan system was fitted to the fast packer pallet loader; this has sensors in six places with full curtain protection so that any intrusion into the working area will immediately stop the process and prevent serious injury.

**Bostik** set its target for 2010 TRIR at 2.4 incidents per million man hours worked and, although the actual figure was 2.55, this represented a significant improvement over the 2009 figure of 3.23.

The company's 'Go Home Safe' course was completed by 600 employees in 2010. In addition, all team leaders and safety representatives now have formal Institute of Occupational Safety and Health (IOSH) qualifications. The Management System was updated in the year to introduce a tenfold increase in the level of safety auditing. Monthly reporting of lead safety indicators and site safety action lists were also introduced. The result was a 20% reduction in TRIR in 2010.



A number of other steps have been taken to reinforce the safety message. Clearer traffic ways to separate people and vehicles were implemented at both sites and information was made more visual. In addition, asbestos has been removed from affected buildings, a new fire detection panel has been installed at the Leicester site and the emergency response teams have been provided with new equipment. The company was also asked to lead a safety training event for the rest of Bostik in Europe as it is recognised as a front-runner in this area within the company.

**Cray Valley** introduced a new hazard report incentive which has resulted in a more proactive approach to both spotting and managing potentially hazardous situations. All supervisors and section leaders now have IOSH or NEBOSH qualifications. In addition, emergency response training was

conducted. To make sure that contractors work to similar standards of safety to employees, the company joined a local initiative called 'CONCOM' which has been set up to verify safety management skills by auditing and certifying contractors.

**Total Gas & Power, Total Petrochemicals UK, Pamargan and Stop-choc** recorded zero LTIs in 2010. Cray Valley confirmed 1,509 days without an LTI. Pamargan introduced a system of reporting and investigating HIPO's. Stop-choc undertook a continuous review of safety training, processes and asset integrity to achieve the highest standards and an internal HSE committee was set up.

# OUR PEOPLE

We value our people and see them as our greatest asset. We remain committed to being an employer of choice.

## Maintaining a Competitive Skills Base

**I**t is an exciting time for our TOTAL E&P UK business (TEP UK) with an ambitious long-term investment programme in the North Sea requiring increased manpower levels. It is our job, and at times our challenge, to source the right skills and competencies. We are addressing this by continuing to attract talented people to come and work for us. Also importantly, we are looking within the organisation to 'grow our own' and to support development and new learning. We invest time and effort into development plans for our staff accompanied by appropriate training as required.

The intake of seven graduates by TEP UK, recruited from places as near as Aberdeen and as far away as India, began their three year development programmes in 2010. TEP UK continues to support a scheme for trainee technicians, managed by OPITO and ECITB. This involves trainees taking part in courses up to HNC or SCQ level 3 with two years at college and two years training on-the-job. 19 young people were taken on the training technician scheme, including five by the Laggan-Tormore project.

In addition, TEP UK sponsored a number of staff who undertook professional courses ranging from chartered engineering, accountancy and human resources, to part time university degrees and vocational qualifications at all levels. Their achievements were celebrated at the annual Achievers Lunch hosted by the MD of TEP UK. The Univation short courses on Managing Finance and How a Business Operates run by Robert Gordon University were well attended, and the company's anti-fraud computer based training was undertaken by 280 people in the year.

In our marketing business, Total UK carried out a major study to identify key competencies and quantify skill ranges for all jobs in its business using the four Total Attitude behaviours and over 200 technical competences.

Over 3,300 training days were undertaken at Total UK in 2010. In addition, 571 retail staff gained NVQ level 2, 21 obtained level 3 and many employees also took advantage of e-learning opportunities provided by the company. The company introduced an on-line programme which allows people to identify their personal competence profile which can then be matched to any job in the business.



Students learn about solar energy at Catalyst Science Centre in Widnes, supported by Total Petrochemicals



Total Petrochemicals wins the prestigious Chemicals Northwest Award for training



Energise your Future event in Aberdeen including graduate trainees from TEP UK

Total Gas & Power (Redhill business) runs a career ladder and talent management scheme. This identifies and prepares people to move up so that, if key people transfer to other jobs, their successor is ready. The company places emphasis on developing people both formally and informally by internal transfer so that individuals keep skills and horizons fresh. The Canary Wharf business also invests a lot of time training and developing staff in its energy trading division. For example, learning about the business, operations and gaining experience on the middle desk in order to become fully qualified and ready for front desk operations. The company also has a graduate recruitment scheme and all its sites continue to offer work placement for students.

In 2010 Total Petrochemicals won the prestigious 'Chemicals Northwest Awards' training award. The company also sponsored an apprentice on a two year course and continues to sponsor degrees and professional qualifications, including a chemical engineer at Strathclyde University and a chemist at Manchester Metropolitan University. Training to NVQ level 2 is encouraged throughout the workforce and 15 members of staff are studying French courses leading to external qualifications by examination.

Bostik recruited three laboratory technicians in the year who will undergo a two year course leading to NVQ Level 3 at Telford College and the company's research and development laboratories. There are plans to expand the scheme to engineering and, eventually, to commercial apprenticeships. All employees are encouraged to further their skills by taking courses and obtaining professional qualifications relevant to their jobs.

Cray Valley has also initiated an apprentice scheme within the engineering department. The apprentice will be trained as a mechanical fitter by Cray Valley in conjunction with a local training centre. Two laboratory technicians are also being sponsored to read chemistry at Hull University on a day release basis. All production staff go through NVQ training

with the company's on-site assessor. Other members of staff are studying for accountancy, environmental and health and safety qualifications. All drivers went on driver training courses and first aid training was also carried out.

Lindsey Oil Refinery (LOR) currently sponsors 14 engineering apprentices and five process apprentices. Two apprentices were presented with awards at the annual dinner of the 'Humber Chemical Focus' for their work. LOR also provides work experience opportunities for year 10 pupils from local schools, undergraduates and post graduates. It also became the first refinery in the UK to gain the Road Transport Industry Training Board accreditation for a training course on rail locomotive driving and shunting. In addition, LOR began training courses on fork lift truck operating and mobile elevating work platforms.

### Encouraging the Next Generation

We actively encourage young people to study science, technology, engineering and maths (STEM) subjects and to take an interest in our industry by informing them of possible career opportunities that are available in science and engineering. Graduates at TEP UK volunteer as STEM ambassadors and together with other employees in the company meet with local schools. Senior TEP UK staff sit on the judging panel of the 'Young Engineers and Science Clubs' awards that take place annually in Glasgow. In 2010 the 'Energise your Future' event took place in Aberdeen with the participation of graduate trainees, and a graduate engineer acted as a mentor for the 'Go4SET' initiative which gives 12 to 14 year olds an insight into how STEM subjects fit into working life. Employees also helped to run 'Young Enterprise' in the Grampian region and the company supports the annual awards dinner, as well as being involved in building a web page directed at school children to tell them about the work of the oil and gas industry. The company continued to provide work experience for school pupils during the year and 20 pupils undertook placements across the company.

## OUR PEOPLE CONTINUED



TEP UK also sponsored a series of ten interactive 'Generation Science' workshops aimed at primary school children to encourage them to think more about science subjects. A career skills workshop sponsored by the company through the Schools Careers Industry Partnership at Fraserburgh Academy was thoroughly enjoyed by the children and described as an outstanding day by school staff.

Total Petrochemicals is one of the major sponsors of the 'Science at Work Week' run every year by the Catalyst Science Discovery Centre in Widnes, Cheshire. The aim is to encourage enthusiasm for science amongst school children by showing them how science is used in everyday life in a fun and engaging way. Over 700 children from across the north west of England visited the event in 2010.

### Celebrating Diversity

A major international organisation such as Total depends upon the skills and hard work of many different people. There are currently over 31 nationalities represented in TEP UK, and over 160 expatriate staff members working in nearly every country in which Total operates. We see diversity as both an advantage and opportunity. We continue to develop a strong organisation that embraces cultural, ethnic and gender differences. More initiatives are planned to underpin our values in this area, with particular emphasis on providing better facilities and access for those with disabilities.



# OUR COMMUNITY

In partnership with the Shetland Isles



**S**hetland is made up of over 100 islands, of which 15 are inhabited. It retains a strong sense of community and we feel strongly that we should become part of that community and be accountable to it.

Senior management and project teams from TOTAL E&P UK (TEP UK) continued to place strong emphasis on establishing that dialogue in 2010 and made regular visits to the Shetland Isles, consulting with and getting to know the local community.

Fewer formal meetings are now required and the local community prefer to use an informal approach to talk to us, raise any areas of concern and we listen.

We also made regular visits to those who live closest to the site of the planned gas plant, taking account of their views and in many cases changing designs to accommodate their wishes. For example, the local community was involved in plans to install a temporary accommodation facility and consulted on both its location and design. We have also met regularly with Shetland Islands Council, Scottish Environmental Protection Agency and Scottish National Heritage amongst others to ensure we act in the best interests of the Shetland Isles. Regular communication takes place through a website and newsletter, 'Frontier News', designed specifically for the islands.

We are also working closely with local schools and some have already been invited to tour the planned gas plant site. The Junior Road Safety Officers from Voe, Brae and Mossbank primary schools were taken on a tour and shown what we are doing to promote safety.

### Responsible Investment

A key part of our strategy was also taking time and committing resource to thoroughly consider the sensitivities of the natural environment in the Shetland Isles. Together with the local community and statutory authorities, it was agreed to take the innovative step of preserving the peat that covers the planned gas plant.

## OUR COMMUNITY CONTINUED



Working with specialists to identify and protect previously undiscovered archaeological sites



# INNOVATING PIONEERING INVOLVING PROTECTING



David Mundell, Parliamentary Under-Secretary of State, Scotland Office, attends ceremonial peat cutting ceremony to officially mark the beginning of the Laggan-Tormore project



Local schools visit new planned site.



The peat story, as it is now known, involved lifting approximately 700,000 square meters of live peat up to five meters deep, and storing it in two specially constructed stores, the largest one of which contains the equivalent of 180 Olympic size swimming pools. The peat will then be reinstated at the end of the plant's working life.

In addition to the peat story, the Shetland Islands have a number of important archaeological sites. When a previously unknown Neolithic site was discovered in the construction area, TEP UK worked closely with

specialist archaeologists to make sure that the find was properly excavated and recorded. This study took six weeks during which time construction work around the area was halted.

A building was uncovered which has been dated at some 4-5,000 years old and each stone on the site was photographed and its position precisely mapped so that the find can be re-built for permanent preservation. Many of the stones were taken to laboratories for further study and the site has already provided valuable information on how prehistoric dwellings were constructed and used.

#### Thinking about all our Neighbours

We also recognise the sensitivity of the wildlife and TEP UK's environmental team work closely with the Shetland Islands Council and other statutory and voluntary organisations to identify and alleviate any concerns. As a result of these consultations, work patterns have been altered to minimise the affect the operations will have on the habitat and environment. This includes a closed season for pipeline construction in inshore waters from June to August to protect seal pupping and moulting and a 30 meter exclusion zone around each birds nest in place. The company also sponsored the Shetland Environmental Awards.



## OUR COMMUNITY CONTINUED



St Fergus creates "eco-circle" in its local community

### Music in the Community

Elsewhere in our operations TEP UK sponsored a week-long outreach music programme by the Royal Scottish National Orchestra (RSNO). There were public performances and music workshops where members of the orchestra held 30 interactive music sessions in primary and secondary schools. Residents living in rural areas of Aberdeenshire had the opportunity to experience classical music in a range of different performances. The week ended with 'Come and Sing' – a specially commissioned piece performed by the RSNO and sung by 200 singers from local choirs.

TEP UK also continued its support for the Scottish charity Music in Hospitals by sponsoring a number of concerts throughout the year. Professional musicians visited residents in hospices, sheltered houses and childrens' hospitals delivering a range of music sessions aimed at social interaction whilst promoting a sense of wellbeing and relaxation.

### Buncefield

Our marketing business, Total UK, continues to actively work with local people, community associations and businesses concerning the redevelopment of the Buncefield site. The new design has been adapted to take into account views expressed by stakeholders. Total UK has a strong relationship with the Dacorum Community Trust and has worked hard to keep all stakeholders fully informed and involved.

### Safety on the Roads

The Total Little Learners road safety campaign was run again by Total UK, and over 3,000 primary school teachers across the UK downloaded the advice and resource packs.

Total Gas & Power has itself introduced a Cycle to Work scheme where staff receive financial assistance toward the purchase of cycles and cycling equipment. The Redhill business is actively involved in the East Area of Surrey Initiatives for Travel (Easit) Forum, a group of local businesses that promote ways to reduce traffic congestion. Measures include a 20% discount on local rail and bus route season tickets.

### Charitable Support

Throughout Total businesses in the UK employees continue to actively give up their time to support their local communities and charity activities.

Employees at TEP UK raised over £50,000 for charity through their own exceptional fundraising and the company matched their funding efforts. To name but a few, donations were given to charities such as Action Medical Research, British Heart Foundation, the Meningitis Research Foundation, the Shipwrecked Mariners, BRAKE and the Fishermen's Society. St Fergus Gas Terminal has a pro-active approach to supporting local charities and social enterprises, enabling capacity building with sustainable benefits for the area which were not previously enjoyed.



Employees at Stop-choc support the Chidamoyo Hospital in Northern Zimbabwe

For example, an "eco-circle" has been set up in the local community to help with eco-gardens, community gardens and projects for vulnerable people. Compost is donated to the Willowbank Adult Training Centre for people with special needs to grow bedding plants which are then sold to the local community, including St Fergus where they are planted around the 220 acre site. In addition, St Fergus recycles its scrap wood and donates it to Woods Recyclability, a nearby charity which employs individuals who have suffered head trauma, in order to make products to sell.

The BRAKE charitable organisation was also supported by Total UK. BRAKE cares for people affected by road accidents, and aims to prevent fatal accidents and injury on the roads. The company and its employees also support the Watford Peace Hospice and the Disability Recreation Unity Movement (DRUM). For the last 9 years Total UK has worked with 'CLIC Sargent', the UK's leading children's cancer charity caring for children and young people with cancer, raising over £30,000 for the charity in 2010.



Volunteers from Total Gas & Power help children from St John's School in Surrey grow flowers and vegetables throughout the year



Lindsey Oil Refinery (LOR) donated to the Linkage Community Trust for people with learning disabilities. As part of its membership of the Humber Industry and Nature Conservation Association (HINCA), LOR worked with HINCA and the British Trust for Conservation Volunteers on the woodland management and conservation of Burkinshaw's Covert, an ancient area of woodland on the eastern edge of the refinery. The area is home to a variety of animals, birds, and insects, including deer, badgers and foxes.

A team from LOR entered the three Yorkshire peaks challenge to raise money for three leading cancer charities. Staff also took part in an 'It's a Knock Out' event to raise money for the St Andrew's Children's Hospice and thousands of pounds were raised by three employees who took part in the London Marathon.

Employees from Total Gas & Power (Redhill business) worked with St John's School in Surrey, helping children grow flowers and vegetables and study their progress through the seasons.

Employees also supported the Lennox Children's Cancer Fund. A team made up of around 10 employees from both the London and Redhill businesses took part in the 'Three Peaks Challenge' to raise money for Care International UK. They raised £5,063 which was matched by the company. In addition, Total Gas & Power set up a charity committee in 2010 which meets quarterly to review and plan charitable support and educational sponsorship for the local community.

Employees at Stop-choc supported the Chidamoyo Hospital in northern Zimbabwe by raising money through a series of events which was matched by the company.

### Cycling for Charity

Employees from Total Petrochemicals took part in the Christies Hospital charity cycle ride to Blackpool and the company paid their entry fees and their transport back to Manchester. Funds were raised for Cancer Research by a team from LOR that cycled from Land's End to John O'Groats in eight days. One of the riders also completed a further charity cycle ride of 129 miles to successfully raise money for the Grimsby Soccer Club juniors. A TEP UK employee cycled from London to Paris to raise money for the Childhood Eye Cancer Trust.

## OUR COMMUNITY CONTINUED

### Supporting Education

TEP UK's Summer Reading Challenge reached its 10th anniversary with 8,800 children taking part. This broke all records and underlines the growing popularity of the programme. 88 children who participated in the challenge were recognised and awarded with certificates and prizes at a ceremony in Meldrum Academy, Aberdeenshire, in October.

Junior Wardens from primary schools in and around Fraserburgh enjoyed a guided tour of St Fergus as part of their community focused learning week. The scheme was set up in 2009 to give children the chance to work with Grampian Police, Grampian Fire and Rescue, the Ambulance service, RNLI and other community partners. The aim of the scheme is to help children gain a better understanding of the importance of a safer community and ways that this can be achieved through effective mentoring and raising awareness.

In our refining and marketing businesses, employees at Total UK continued to help children improve their reading and communication skills and the company once again supported the Watford Learning Centre. Total Bitumen supported the Preston North End Learning Centre. The company is also involved in the Wakefield Employer Forum assisting young people prepare for work. Total UK has had a long association with the Watford Football Club Community Sports and Education Trust. The Trust runs educational and social inclusion programmes for the local community including a Disability Football course.

LOR sponsored the 23rd Maths Challenge, involving children from 12 secondary schools in North East Lincolnshire. LOR also participated in the Chemistry at Work day in which children from a number of local schools took part. Cray Valley continued its association with local schools and ran an energy competition for GCSE pupils.



TEP UK's Reading Challenge is now in its 10th year



Junior Wardens are given a tour of the St Fergus site

Total Petrochemicals again sponsored a visit by 70 local year six primary school children to the Catalyst Science Discovery Centre in Widnes, Cheshire. Total Petrochemicals is the main sponsor of a new energy exhibition at the Science Centre looking at solar energy. In addition, the company continued to work with West Hill School, a secondary specialist science college, providing visits to its Stalybridge site and giving talks.

School pupils once again visited Bostik's Stafford site to support their GCSE studies in applied science. They were introduced to the importance of safety with a practical hazard spotting exercise.

# ENERGY AND CLIMATE CHANGE

## Reducing our Carbon Footprint

Our offshore platforms as well as St Fergus Gas Terminal and Lindsey Oil Refinery (LOR) are regulated under the European Union Emissions Trading Scheme. Under the scheme all of our CO<sub>2</sub> emissions data must be independently verified each year by an accredited external verifier.



# ENERGY AND CLIMATE CHANGE CONTINUED

**M**anaging our energy production and use is key to reducing our environmental emissions. In 2010, Total E&P UK (TEP UK) completed a series of energy efficiency assessments for all onshore and offshore installations, with the final assessment performed on our Dunbar platform. During 2010, the challenge for TEP UK was to plan for the execution of improvements identified in these assessments.

As part of a corporate objective, LOR has year on year energy efficiency improvement targets. In 2010 the £200 million HDS-3 major investment was completed and will enable the refinery to produce more low sulphur diesel. Clean, low sulphur fuels enable vehicles to be more fuel efficient and emit lower levels of greenhouse gases. In addition, construction work began to provide bio-ethanol injection facilities and the first blended petrol fuels are due to be produced in the spring of 2011 (LOR already incorporates bio-diesel in its diesel fuel). The bio-ethanol will be blended with premium unleaded petrol to meet the UK Government requirement that 5% of all road vehicle fuel is supplied from sustainable renewable sources. At a cost of £10.2 million, the new plant represents a significant investment in cleaner fuel. Additionally, a new sulphur recovery unit was commissioned which will ensure that atmospheric emissions of SO<sub>2</sub> from LOR are kept well within limits.

## Assisting our Customers with Energy Efficiency

Total Gas & Power installed a further 6,140 automated meter reading (AMR) technology units. AMR provides customers with highly accurate information about how they use their energy, enabling them to control consumption more effectively and so save money and lower their carbon emissions. It also contributes to greatly improved billing accuracy and fewer estimated bills. Total Gas & Power's energy services business was set up to help both existing and new electricity and gas customers reduce consumption and hence consequential emissions by using AMR and voltage correction technologies. Total has installed AMR's in its own factories, retail petrol sites, depots and offices. Total Gas & Power also successfully worked in partnership with a major London museum to improve energy management systems which are expected to be completed in 2011. The company also sponsored the 2010 Independent Energy Consultant of the Year awards.

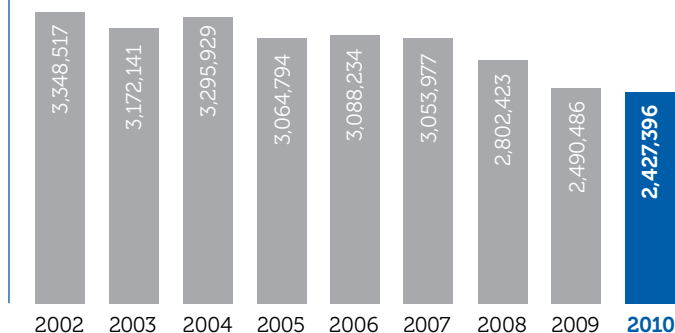


| Automatic Meter Reading

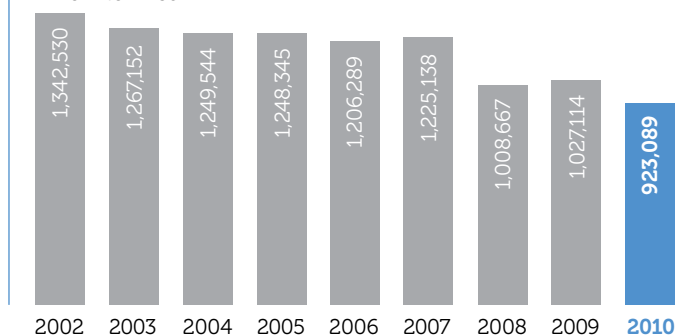
## Reducing CO<sub>2</sub> emissions

Total continues its trend of reducing emissions of CO<sub>2</sub>, noting that emissions from LOR in 2009 and 2010 were lower than would normally be expected due to periods of low activity while site works were carried out. However, even accounting for this the trend remains downwards.

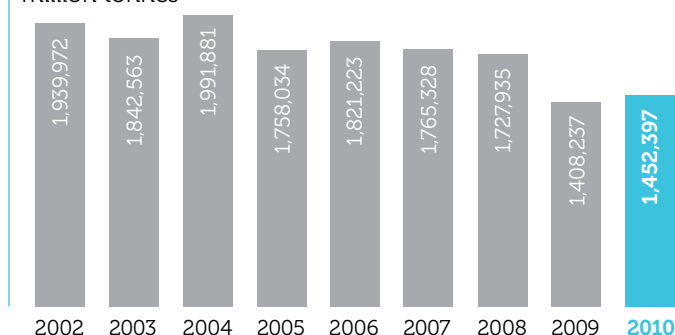
### ALL UK ACTIVITY CO<sub>2</sub> emissions million tonnes



### TEP UK CO<sub>2</sub> emissions million tonnes



### LINDSEY OIL REFINERY CO<sub>2</sub> emissions million tonnes

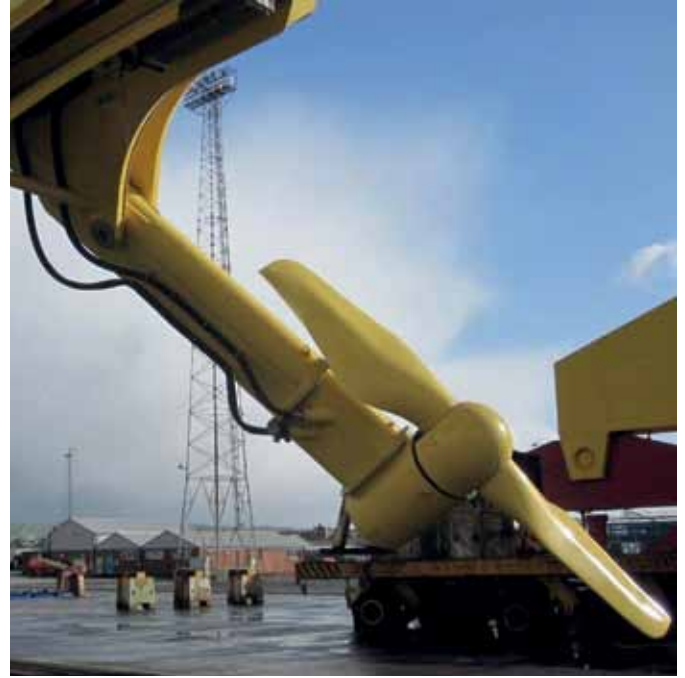




| Total Petrochemicals monitors energy use in its production process

### Monitoring energy use

Total Petrochemicals regularly monitors the exhaust from boilers used in the production of polystyrene so that air emissions can be accurately controlled. Whilst these boilers are capable of being run on diesel fuel, they burn natural gas in preference. Natural gas is one of the cleanest sources of combustion energy. The company continually monitors energy use in its production process so that targets for improvement can be identified and plans for action drawn up. This resulted in a scrubber system being installed in the exhaust stack. The scrubber captures polluting gasses and particles from the production process that were previously emitted to the atmosphere. Subsequent monitoring has shown a significant reduction in VOC's emitted. In addition, an instrument called a Porpoise has been installed. This continuously measures the polymer viscosity in the production process, which has resulted in the production of less waste.



| Tidal Power

### Harnessing new energy resources

Total is a partner in Scotrenewables Tidal Power which has designed a tidal powered generator with a 250 kW capacity. The generator is tethered and allowed to swing around on its moorings, enabling it to operate at maximum efficiency 24 hours a day throughout the tidal sequence. It is 30 metres long, weighs 80 tonnes and power is generated via two rotors fitted at the end of arms, on either side of the hull, which are turned as the tide comes both in and out. Following successful testing in 2009 using a one fifth scale model, the full sized version was built in 2010. After operations begin, the power will be sent to the European Marine Energy Centre and the National Grid. Future plans include building one megawatt units for commercial use as offshore generators to contribute to the National Grid and also to provide power for oil and gas exploration and production activities in more distant waters.

## TOTAL E&P UK

### Environmental indicators – offshore

	2010	2009	2008
<b>Total production</b> (100% operated – million barrels of oil equivalent)	<b>94.60</b>	104.03	98
<b>Atmospheric emissions</b> (tonnes/year from DECC EEMS returns)			
Carbon Dioxide (CO <sub>2</sub> )	<b>862,811</b>	967,658	937,923
Volatile organic compounds (VOCs)	<b>1,783</b>	2,218	1,182
Methane (CH <sub>4</sub> )	<b>3,387</b>	3,998	1,152
Sulphur dioxide (SO <sub>2</sub> )	<b>3</b>	20	6
Nitrogen oxides (NO <sub>x</sub> )	<b>2,077</b>	3,282	2,629
Carbon monoxide (CO)	<b>1,238</b>	1,488	1,571
Hydrofluorocarbons	<b>0</b>	0	0
<b>Produced water</b>			
Number of OPPC excursions above permitted 30mg/l monthly average	<b>6</b>	6	2
Number of OPPC excursions above permitted maximum oil concentration of 100mg/l	<b>15</b>	24	24
Average oil in water content (mg/l) – Alwyn Area	<b>48.5</b>	44	24
Weight of oil discharged (tonnes) – Alwyn Area	<b>1.3</b>	2.1	21
Average oil in water content (mg/l) – Elgin/Franklin	<b>9.8</b>	11.4	12
Weight of oil discharged (tonnes) – Elgin/Franklin	<b>2.6</b>	2.4	2
<b>Spills and produced water sheens</b> outwith 500 m zone (from DECC PO1N submissions)			
Number of oil spills	<b>38</b>	27	25
Oil lost (tonnes)	<b>0.5</b>	0.3	1
Number of chemical spills	<b>16</b>	19	9
Chemical lost (tonnes)	<b>133</b>	59	29
Number of produced water sheens	<b>0</b>	0	1
Oil lost (tonnes)	<b>0</b>	0	0.4
<b>Waste</b> (tonnes per year) (North Sea including Altens Office, Warehouse and Quay)			
Overall waste production	<b>8,429</b>	14,654	11,004
Hazardous waste*			
Disposal/treatment on/off site	<b>5,298.9</b>	5,907	6,613
Non Hazardous			
Disposal/treatment on/off site	<b>3,129</b>	8,723	4,332
Recycled**	<b>1,784</b>	7,479***	2,248

\* Includes waste from drilling activities.

\*\* Includes hazardous and non-hazardous wastes.

\*\*\* 2009 waste high due to decommissioning of MCP01.

## TOTAL E&P UK continued

### Environmental indicators – St Fergus

	2010	2009	2008
<b>Overall throughput</b> (sm <sup>3</sup> per day)	<b>33,379,345</b>	31,740,000	40,440,000
The production figure is based on : Gross = wellhead production (excl. Gas-lift), or Gross = export prod. + internal consump. + flared and vented + reinjected + losses This figure is not the NET production			
<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>Millar</b>			
Chemical Oxygen Demand (COD) mg/l	<b>14</b>	30.00	22
Biochemical Oxygen Demand (BOD) mg/l	<b>2.9</b>	8.50	1.9
Suspended solids mg/l	<b>6.30</b>	4.60	4
Hydrocarbons mg/l	<b>1.21<sup>1</sup></b>	0.54	0.2
pH	<b>7.7</b>	7.18	n/a
<b>Phase II/III</b>			
Chemical Oxygen Demand (COD) mg/l	<b>43.7</b>	53.10	43.2
Biochemical Oxygen Demand (BOD) mg/l	<b>15</b>	16.80	12.4
Suspended solids mg/l	<b>19</b>	18.20	15.1
Hydrocarbons mg/l	<b>1.8<sup>1</sup></b>	0.60	0.4
pH	<b>7.6</b>	7.51	7.24
<b>Air emissions</b> (tonnes per year)			
Volatile organic compounds (VOCs)	<b>48.98</b>	55.33	60.47
Carbon dioxide (CO <sub>2</sub> )	<b>60,278<sup>2</sup></b>	59,456	70,744
Nitrogen oxides (NO <sub>x</sub> )	<b>50.45<sup>3</sup></b>	48.89	59.9
Sulphur dioxide (SO <sub>2</sub> )	<b>0.128<sup>4</sup></b>	0.24	0.432
<b>Waste</b> (tonnes per year) – St Fergus Terminal Routine Wastes			
Overall waste production	<b>694</b>	1,048	1,037
Hazardous	<b>111</b>	180	110
Non-hazardous	<b>573</b>	868	880
Overall waste recycled	<b>404</b>	773	808
Overall waste to landfill	<b>70</b>	93	89
<b>Waste</b> (tonnes per year) – MRF Decommissioning wastes (project) <sup>5</sup>			
Overall waste production	<b>326</b>	2,957	Decommissioning
Hazardous	<b>0</b>	152	activities
Non-hazardous	<b>326</b>	2,805	started
Overall waste recycled	<b>0</b>	1	in March
Overall waste to landfill	<b>326</b>	50	2009

<sup>1</sup> Increase from 2009 due to one off-spec discharge from Ph2/3 to public sewer.

<sup>2</sup> CO<sub>2</sub> emitted from power generation and flaring activities as regulated under the European Union Emissions Trading Scheme (EU ETS).

<sup>3</sup> Increase in NO<sub>x</sub> as a result of increased fuel gas consumption due to increased terminal throughput. Overall flaring reduced.

<sup>4</sup> Reduction in SO<sub>2</sub> due to cessation of MRF Process.

<sup>5</sup> The only waste generated at MRF in 2010 were 328.26 tonnes of non-hazardous sludges which were sent to landfill.

## TOTAL E&P UK continued Environmental indicators – St Fergus

	2010	2009	2008
<b>Emissions</b> limits under PPC regulations for discharge to public sewer (both plants)*			
COD	100	100	100
BOD	50 (XTOM2) <sup>1</sup> 40 (XTOM5) <sup>2</sup>	50 (XTOM2) 40 (XTOM5)	40
Suspended solids	50	50	50
Hydrocarbons	5	5	5
pH	5 – 9	5 – 9	5 – 9

<sup>1</sup> XTOM2 – PHII/III discharge to sewer

<sup>2</sup> XTOM5 – MRF discharge to sewer

## Health and Safety Indicators – offshore and St Fergus

	2010	2009	2008
<b>Employees and contractors</b>			
Fatalities (number)	0	0	0
Number of lost time incidents reportable under RIDDOR (>three days lost)	7	12	10
Number of dangerous occurrences reportable under RIDDOR	20	20	13
Number of manhours worked*	6,927,789	6,724,653	6,555,384

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

## Total Gas & Power\* Health and Safety Indicators

	2010	2009	2008
<b>Employees and contractors</b>			
Fatalities (number)	0	0	0
Number of lost time incidents reportable under RIDDOR	0	0	0
Number of minor office incidents reported in the accident book	1	4	2

\* Including Redhill, Leeds and London employees and contractors.

## Total UK Environmental indicators

	2010	2009	2008
<b>Petroleum products marketed</b> (tonnes per year) <sup>1</sup>	<b>5,895,533</b>	6,220,547	8,428,182
<b>Spillages</b> <sup>2</sup>	<b>50</b>	72	92
<b>Air emissions</b> (tonnes per year)			
Carbon dioxide (CO <sub>2</sub> ) direct <sup>3</sup>	<b>40,768</b>	42,914	51,522
Nitrogen oxides (NO <sub>x</sub> ) direct <sup>3</sup>	<b>157</b>	177	89
Sulphur dioxide (SO <sub>2</sub> ) direct <sup>3</sup>	<b>32</b>	35	157
<b>Waste</b> (tonnes per year)			
Overall waste production	<b>11,713</b>	12,038	14,759
Hazardous			
Disposal/treatment on/off site	<b>2,048</b>	2,535	5,845
Non-hazardous			
Disposal/treatment on/off site	<b>9,665</b>	9,503	8,914
Recycled <sup>4</sup>	<b>1,440</b>	1,572	2,264

<sup>1</sup> Only product marketed from Company Owned Company Operated site reported as per Group guidance.

<sup>2</sup> Reported spillages include any spill over ten litres as per Group guidance.

<sup>3</sup> Direct emissions are those stemming from combustion or fuel use including road transport under company responsibility.

<sup>4</sup> Recycling is outsourced through contract. The figure is calculated under the Producer Responsibility Obligations (Packaging Waste) Regulations 2007 and reflects the company's obligation to obtain Packaging Recovery Notes to meet government targets.

## Health and Safety Indicators

	2010	2009	2008
<b>Employees and contractors</b>			
Fatalities (number)	<b>0</b>	0	0
Number of lost time incidents reportable under RIDDOR (>three days lost)*	<b>9</b>	7	19
Number of dangerous occurrences reportable under RIDDOR	<b>2</b>	0	1
Number of manhours worked – employees	<b>6,474,736</b>	6,817,373	7,139,838
Number of manhours worked – contractors	<b>1,191,526</b>	1,146,125	1,265,421
<b>Members of public</b> (excluding employees and contractors)			
Accidents (number)**	<b>114</b>	145	177

\* This figure covers Total UK staff only as Total UK is not responsible for the reporting of contractor incidents under RIDDOR.

\*\* Accidents reported by customers while visiting Total UK's service stations (company-owned and commission-operated only).

## Lindsey Oil Refinery Environmental indicators

	2010	2009	2008
<b>Overall throughput</b> (tonnes per year)	<b>6,932,000</b>	7,870,000	9,080,000
<b>Workhours</b>	<b>2,560,245</b>	2,990,792	2,655,931
<b>Aqueous effluents</b> (annual averages)			
Volume (m <sup>3</sup> /yr)	<b>3,082,855</b>	3,187,193	2,913,826
Chemical Oxygen Demand (COD) (mg/l)	<b>84</b>	87	98
Suspended solids (mg/l)	<b>19</b>	16	13
Hydrocarbons (mg/l)	<b>1.60</b>	1.30	1.30
Metals (As + Cd + Cr + Hg + Pb and compounds) (mg/l)	<b>0.014</b>	0.011	0.015
Metals (Cu + Ni + Zn and compounds) (mg/l)	<b>0.06</b>	0.05	0.03
<b>Spillages</b>	<b>0</b>	0	0
<b>Air emissions</b> (tonnes per year)			
Volatile organic compounds (VOCs)	<b>2,375</b>	3,471	3,930
Carbon dioxide (CO <sub>2</sub> )	<b>1,452,397</b>	1,400,102	1,727,935
Nitrogen oxides (NO <sub>x</sub> )	<b>1,093</b>	1,361	1,685
Sulphur dioxide (SO <sub>2</sub> )	<b>5,227</b>	6,457	9,326
<b>Waste</b> (tonnes per year)			
Overall waste production	<b>5,568</b>	4,505	27,301
Hazardous			
Disposal/treatment on site	<b>0</b>	0	0
Disposal/treatment off site	<b>1,509</b>	2,553	1,422
Non-hazardous			
Disposal/treatment on site	<b>0</b>	0	0
Disposal/treatment off site	<b>1,183</b>	1,103	25,227
Recycled	<b>2,875</b>	848.68	652

## Health and safety indicators

	2010	2009	2008
<b>Employees and contractors</b>			
Fatalities (number)	<b>1</b>	0	0
Number of lost time incidents reportable under RIDDOR (>three days lost)	<b>9</b>	3	5
Number of dangerous occurrences reportable under RIDDOR	<b>4</b>	2	3
Number of manhours worked – employees	<b>943,968</b>	946,102	906,199
Number of manhours worked – contractors	<b>1,616,277</b>	2,044,690	1,749,732
<b>Members of public</b> (excluding employees and contractors)			
Accidents (number)	<b>0</b>	0	0

# Atotech

## Environmental indicators

	2010	2009	2008
<b>Manhours</b>	<b>92,258</b>	88,618	106,456
<b>Aqueous effluents</b> (tonnes per year)			
Volume	<b>73</b>	93	101
<b>Spillages</b>	<b>0</b>	0	0
<b>Waste</b> (tonnes per year)			
Waste production	<b>25</b>	55	52
Hazardous			
Disposal/treatment on site	<b>0</b>	0	0
Disposal/treatment off site	<b>6</b>	25	33
Non-hazardous			
Disposal/treatment on site	<b>0</b>	0	0
Disposal/treatment off site	<b>17</b>	0	15
Recycled	<b>2</b>	3	4

## Health and safety indicators

	2010	2009	2008
<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>90,496</b>	87,898	106,313
Number of manhours worked – contractors	<b>762</b>	720	143
<b>Members of public</b> (excluding employees and contractors)			
Accidents (number)	<b>0</b>	0	0

## Bostik

### Environmental indicators

	2010	2009	2008
<b>Overall throughput</b> (tonnes per year)	<b>125,955</b>	139,284	144,972
<b>Workhours</b>	<b>1,074,611</b>	1,127,217	1,249,379
<b>Aqueous effluents</b> (annual averages)			
Volume (cubic metres)	<b>94,019</b>	80,731	118,200
Chemical Oxygen Demand (COD) (mg/l)	<b>38</b>	39	49
Suspended solids (mg/l)	<b>9</b>	19	27
Hydrocarbons (mg/l)	<b>0</b>	0	0
Metals (As + Cd + Cr + Hg + Pb and compounds) (mg/l)	<b>0</b>	0	0
Metals (Cu + Ni + Zn and compounds) (mg/l)	<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>138</b>	127	160
Carbon dioxide (CO <sub>2</sub> )	<b>4,991</b>	5,536	7,200
Nitrogen oxides (NO <sub>x</sub> )	<b>6</b>	6	8
Sulphur dioxide (SO <sub>2</sub> )	<b>5</b>	6	7
<b>Waste</b> (tonnes per year)			
Overall waste production	<b>2,637</b>	3,119	4,230
Hazardous			
Disposal/treatment on site	<b>0</b>	0	0
Disposal/treatment off site	<b>446</b>	480	1,283
Non-hazardous			
Disposal/treatment on site	<b>0</b>	0	0
Disposal/treatment off site	<b>1,632</b>	1,881	2,947
Recycled	<b>559</b>	758	1,218

### Health and safety indicators

	2010	2009	2008
<b>Employees and contractors</b>			
Fatalities (number)	<b>0</b>	0	0
Number of lost time incidents reportable under RIDDOR (>three days lost)	<b>2</b>	0	3
Number of dangerous occurrences reportable under RIDDOR	<b>0</b>	3	1
Number of manhours worked – employees	<b>1,074,611</b>	1,127,217	1,249,379
Number of manhours worked – contractors	<b>103,421</b>	111,050	101,760
<b>Members of Public</b> (excluding employees and contractors)			
Accidents (number)	<b>0</b>	0	0

## Cray Valley

### Environmental indicators

	2010	2009	2008
<b>Overall production</b> (tonnes per year)	<b>55,360</b>	57,745	58,599
<b>Workhours</b>	<b>229,539</b>	227,271	270,591
<b>Aqueous effluents</b> (annual averages)			
Volume	<b>22,714</b>	21,791	24,086
Chemical Oxygen Demand (COD) (mg/l)	<b>1,515</b>	1,568	31 <sup>†</sup>
Suspended solids (mg/l)	<b>405</b>	420	8 <sup>†</sup>
Hydrocarbons (mg/l)	<b>0</b>	0	0
Metals (As + Cd + Cr + Hg + Pb and compounds) (mg/l)	<b>0</b>	0	0
Metals (Cu + Ni + Zn and compounds) (mg/l)	<b>0</b>	0	0
<sup>†</sup> Tonnes (2009 tonnes = 34)			
<sup>†</sup> Tonnes (2009 tonnes = 9)			
<b>Spillages</b>	<b>8</b>	6	6
<b>Air emissions</b> (tonnes per year)			
Volatile organic compounds (VOCs)	<b>4.15</b>	4.18	4.34
Carbon dioxide (CO <sub>2</sub> )	<b>4,352</b>	5,142	5,702
Nitrogen oxides (NO <sub>x</sub> )	<b>0.19</b>	0.20	0.25
Sulphur dioxide (SO <sub>2</sub> )	<b>0</b>	0	0
<b>Waste</b> (tonnes per year)			
Overall waste production	<b>1,745</b>	1,328	1,351
Hazardous	<b>1,173*</b>	579	521
Disposal/treatment on site	<b>0</b>	0	0
Disposal/treatment off site	<b>1,173</b>	579	521
Non-hazardous	<b>572</b>	749	829
Disposal/treatment on site	<b>0</b>	0	0
Disposal/treatment off site	<b>499</b>	589	744
Recycled	<b>73</b>	160	85

## Health and safety indicators

	2010	2009	2008
<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>229,539</b>	227,271	243,332
Number of manhours worked – contractors	<b>21,880</b>	25,184	27,259
<b>Members of public</b> (excluding employees and contractors)			
Accidents (number)	<b>0</b>	0	0

\* Increase due to accumulated quantities of hazardous waste originally intended for reuse being safely disposed of when reuse was found to be impracticable.

## Total Petrochemicals Environmental indicators

	2010	2009	2008
<b>Overall production</b> (tonnes per year)	<b>70,197</b>	53,509	53,018
<b>Manhours</b>	<b>223,771</b>	201,127	242,439
<b>Aqueous effluents</b> (annual averages)			
Volume (cubic metres)	<b>28,500</b>	43,424	45,167
Chemical Oxygen Demand (COD) (mg/l)	<b>33</b>	33	49
Suspended solids (mg/l)	<b>9</b>	10	7
Hydrocarbons (mg/l)	<b>0</b>	0	0
Metals (As + Cd + Cr + Hg + Pb and compounds) (mg/l)	<b>0</b>	0	0
Metals (Cu + Ni + Zn and compounds) (mg/l)	<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>4</b>	4	3
Carbon dioxide (CO <sub>2</sub> )	<b>1,520</b>	1,339	1,224
Nitrogen oxides (NO <sub>x</sub> )	<b>0</b>	0	0
Sulphur dioxide (SO <sub>2</sub> )	<b>0</b>	0	0
<b>Waste</b> (tonnes per year)			
Overall waste production	<b>1,091*</b>	794	866
Hazardous	<b>312</b>	231	217
Disposal/treatment on site	<b>0</b>	0	0
Disposal/treatment off site	<b>312</b>	231	217
Hazardous recycled	<b>0</b>	0	0
Non-hazardous	<b>779</b>	563	649
Disposal/treatment on site	<b>0</b>	0	0
Disposal/treatment off site	<b>79</b>	76	71
Non-hazardous recycled	<b>700</b>	411	578

## Health and safety indicators

	2010	2009	2008
<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>186,231</b>	182,388	230,688
Number of manhours worked – contractors	<b>37,540</b>	18,738	11,751
<b>Members of public</b> (excluding employees and contractors)			
Accidents (number)	<b>0</b>	0	0

\* Overall waste rose due to an increase in production of 30%. The increase in hazardous waste also resulted from the increase in overall production and from some waste being changed in classification from non-hazardous to hazardous.

## Pamargan

### Environmental indicators

	2010	2009	2008
<b>Total Production</b> (units per year)	<b>20,311,580</b>	17,445,221	30,139,872
<b>Manhours</b> (production)	<b>64,460</b>	54,793	78,120
<b>Spillages</b>	<b>0</b>	0	0
<b>Waste</b> (tonnes per year)			
Waste production – litres	<b>820</b>	800	610
Waste production – cubic metres	<b>266</b>	152	172
Hazardous			
Disposal/treatment on site	<b>n/a</b>	n/a	n/a
Disposal/treatment off site in litres	<b>820</b>	800	610
Non-hazardous			
Disposal/treatment on site	<b>n/a</b>	n/a	n/a
Disposal/treatment off site in cubic metres	<b>60</b>	78	90
Recycled	<b>206</b>	74	82
n/a = not available.			

### Health and safety indicators

	2010	2009	2008
<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>	1	0
Number of dangerous occurrences reportable under RIDDOR	<b>0</b>	0	0
Number of manhours worked – employees	<b>64,460</b>	54,793	78,120
Number of manhours worked – contractors	<b>80</b>	100	0
<b>Members of public</b> (excluding employees and contractors)			
Accidents (number)	<b>0</b>	0	0

## Sovereign Chemicals Environmental indicators

	2010	2009	2008
<b>Overall production</b> (tonnes per year)	<b>3,327</b>	3,474	4,034
<b>Manhours</b>	<b>111,360</b>	119,186	133,484
<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>279</b>	201	173
Nitrogen oxides (NO <sub>x</sub> )	<b>1.9</b>	0.3	1.2
Sulphur dioxide (SO <sub>2</sub> )	<b>0.4</b>	0.1	0.1
<b>Waste</b> (tonnes per year)			
Overall waste production	<b>87</b>	93	115
Hazardous			
Disposal/treatment on site	<b>0</b>	0	0
Disposal/treatment off site	<b>7</b>	14	4
Non-hazardous			
Disposal/treatment on site	<b>0</b>	0	0
Disposal/treatment off site	<b>80</b>	79	111
Recycled	<b>26</b>	26	35

## Health and safety indicators

	2010	2009	2008
<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>	1	0
Number of dangerous occurrences reportable under RIDDOR	<b>0</b>	0	0
Number of manhours worked – employees	<b>111,360</b>	119,186	133,484
Number of manhours worked – contractors	<b>1,287</b>	917	1,759
<b>Members of public</b> (excluding employees and contractors)			
Accidents (number)	<b>0</b>	0	0

## Stop-choc

### Environmental indicators

	2010	2009	2008
<b>Manhours</b>	<b>175,109</b>	184,374	169,357
<b>Spillages</b>	<b>0</b>	0	0
<b>Waste</b> (tonnes per year)			
Waste production	<b>10</b>	12	11
Hazardous			
Disposal/treatment on site	<b>0</b>	0	0
Disposal/treatment off site	<b>1</b>	1	1
Non-hazardous			
Disposal/treatment on site	<b>0</b>	0	0
Disposal/treatment off site	<b>4</b>	8	7
Recycled	<b>5</b>	3	3

### Health and safety indicators

	2010	2009	2008
<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>130,918</b>	134,369	128,398
Number of manhours worked – contractors	<b>44,191</b>	49,905	40,959
<b>Members of public</b> (excluding employees and contractors)			
Accidents (number)	<b>0</b>	0	0

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