



## Sustainable Business Awards for the South East 2004

# Case Study - The BP Oil Terminal

### Company Background

BP has gained worldwide recognition for its commitment to sustainable development. In 2003, BP invested in energy efficiency projects that will reduce future greenhouse gas emissions by 1.4 million tonnes, and increased the number of its major operations certified to the ISO14001 standard to 85 out of 86. This commitment is clearly reflected at the BP Hamble Oil Terminal. The terminal in Hampshire acts as an important hub for the transportation of oil and refined products.

At Hamble, crude oil is delivered by pipeline and transported from there to the world's refineries by seagoing tankers. Refined products reach the terminal by ship and pipeline and are then distributed to customers by road tanker, ship and pipeline.

In between arrival at the terminal and subsequent distribution, both crude oil and refined products are stored in a series of large tanks; five tanks are devoted to crude oil and 25 to the range of refined products.

### Sustainability Initiatives

The Hamble terminal has an environmental policy and management system, which is certified to ISO14001 standards. BP also has a social investment policy, which aims to make the company a force for good in local communities. The delivery of this policy is supported by a public affairs programme at the Hamble terminal, which has incorporated a range of initiatives in the local community.

### Contribution to a Sustainable Economy

Attempts are made to source employees locally and use local suppliers. For example, a local firm constructed the wetlands project and a local builder is used for small-scale construction work on the site.









### Enhancing Environmental Quality

The terminal has made significant efforts to promote local biodiversity, including a wetlands water treatment system and a biodiversity study and action plan.

The wetlands were opened in 2003, with the goals of improving biodiversity on site and providing a sustainable system for treating contaminated surface water. 15,000 plants were introduced, across 0.5 acres. These plants can process up to 360 million litres of surface water annually.

Produced in conjunction with Southampton University, the biodiversity study and action plan resulted in a series of actions. The local school made bird and bat boxes to encourage wildlife, while steps were taken to protect a patch of bee orchids.

### Summary of Key Achievements

- Biodiversity study and biodiversity action plan, produced in conjunction with Southampton University and the local school 
- Wetlands water treatment system developed, which uses 15,000 plants to treat up to 360 million litres of contaminated surface water effluent per year 
- Solar power system installed to provide heat and hot water to office, together with new, higher efficiency back-up boiler 
- Zero waste initiative under way, incorporating waste reduction, reuse, recycling and bioremediation 
- Safety campaigns for road transport to site, including voluntary speed limit in a residential area and visits to local schools 
- Noise reduction measures introduced to manage local noise nuisance 
- Policy to source employees locally and use local subcontractors, which has included the use of local builders for the construction of small-scale works and the wetlands site 
- Sustainable transport initiatives, including load maximisation for vehicles and provision of bikes for on-site transport 

#### KEY



ENVIRONMENTAL BENEFITS



BUSINESS BENEFITS



ECONOMIC BENEFITS



SOCIAL BENEFITS

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Compost is produced on site from green waste and bioremediation of hydrocarbon waste. This compost is used to improve green areas at the terminal, with the goal of creating green corridors across the site.

The terminal is promoting a zero waste initiative, incorporating measures to reduce, reuse and recycle waste. The introduction of facilities for bioremediation of hazardous wastes and contaminated organic materials using fungi and bacteria was a major, innovative component of this initiative, and is believed to be the first process of its kind in the country. Pilot tests showed reductions in all major contaminants. Furthermore, the compost produced by the bioremediation process has been shown to be close to grade A agricultural standard – in a test, tomato plants were found to grow more successfully in the bioremediation compost than in normal soil or commercial compost. The cost of processing hazardous waste has been reduced dramatically from £240 per m<sup>3</sup> to send it to landfill, to £56 per m<sup>3</sup> for bioremediation. In the future, compost is likely to be donated to local clubs or schools for landscaping.

Other aspects of the zero waste initiative have included: on-site storage of demolition wastes for use as hardcore; recycling of paper, gloves, tyres, waste oil, batteries, cups and metals.

Solar water heating has recently been introduced, which provides hot water and heating to the offices. This investment was coupled with the installation of a new, higher efficiency, condensing-type boiler to provide back-up space heating.

Since a leak reduction survey in 2001, water consumption at the terminal has been reduced by 50%. Water management initiatives include use of seawater to wash storage tanks and recycling of all water used for the on-site lorry wash.

All road tankers at the site run on BP's ultra low sulphur diesel, reducing emissions. Load maximisation has been conducted to improve transportation efficiency, which involved working with vehicle manufacturers. Over the past two years, the load per tanker has increased by almost 10%, reducing the number of journeys required. For on-site transportation, 30 bicycles are provided at the terminal and bicycle sheds have been installed to encourage staff from the local area to cycle to work.

### Improving the Social Wellbeing of Stakeholders

Community responsibility has been managed through a programme of public communications and community involvement initiatives.

Drivers from the terminal agreed to a voluntary 30mph speed limit on Hamble Lane, to improve safety for local residents and schools located on the road. Road tanker drivers have also visited local schools with their vehicles, to educate children on the dangers of large vehicles.



360 million litres of contaminated water are treated in the wetlands annually



Contaminated water before (left) and after treatment in the wetlands

To reduce noise nuisance, crude oil pumps at the terminal have been enclosed and a hedge planted to provide a noise buffer between the terminal and a neighbouring residential area.

The terminal provides work experience for secondary school children, allowing them to gain firsthand experience of life at the terminal. One work experience student has since been successfully employed with a BP contractor.

The terminal has supported several local projects, including: building a garden at a local playgroup; rewarding boys from the local football club with new sports equipment in return for their involvement in litter picking at the local beach and allowing local clubs to use the sports facilities on site.

Driver gloves and paper used on site are produced from recycled materials, reduced Volatile Organic Compounds paints are used, and mulched green waste from the site is used as a replacement absorbent material to soak up hydrocarbons from hazardous waste bins or spillages.

Workforce development activities have included:

- **Involvement in sustainability initiatives** – Staff are encouraged to participate in sustainability community projects
- **Access to IT facilities** – All staff now have access to IT facilities due to a recently built drivers' computer room

Efforts to communicate effectively with stakeholders and share best practice have incorporated:

- **Stakeholder communications** – Members of the public are welcomed to the site and are invited to take part in tours of the facilities. The scope for engaging public interest in the terminal will improve with completion of the new visitors exhibition
- **Promotion of sustainability initiatives** – The terminal communicates information on its sustainability initiatives to other parts of BP Group. A BP site in Carlisle is now investigating possibilities for installing its own wetlands system, modelled on experience gained at Hamble

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