



# Case Study GD04



## Achievements

Over 3 years:

- 85% reduction in waste to landfill
- 67% reduction in hazardous waste
- 700% increase in recycling of wood and plastics
- 250m<sup>3</sup> (11.6%) reduction in water usage
- 240 tonnes (12%) reduction in CO<sub>2</sub> emissions

75% of staff trained in COSHH awareness and waste

Won Wales Business & Sustainability Awards 2006  
EMS award

Green Dragon Environmental Standard® Level 5 and ISO 14001

## Business Support

- ARENA Network
- Carbon Trust
- Environment Agency
- Blaenau Gwent Council

## Company Data

- Sector – Pharmaceuticals
- Location – Tredegar
- Turnover – £15.4 million
- No of staff – 200

## Penn Pharmaceutical Services Ltd Green Dragon Leads to a Highly Trained Workforce

### Background

Founded in 1979 and based in Tredegar since 1986, Penn Pharmaceutical Services Ltd provides a fully integrated and comprehensive range of pharmaceutical outsourcing services to the international healthcare industry. Penn's business has grown significantly year on year and amongst its many commercial awards achieved the Queen's Award for Export International Trade in 2003.

### Starting Out

At the beginning of the project in 2001, and following an internal review, the Board of Directors and Executive Committee supported the recruitment of a graduate placement Environmental Research Assistant. This position received funding support from ARENA Network.

A great deal of data was collected and analysed but it was agreed that the only way of understanding and managing the company's environmental impacts was to implement an Environmental Management System (EMS). Green Dragon was chosen due to its structure - the staged processes enabled Penn to work towards their goal in manageable steps.

### Implementation

Penn committed to the Green Dragon Environmental Standard® in 2002 followed by an external audit conducted by ARENA Network in July 2002. The audit results were then incorporated into action plans. The Environmental and Health and

Safety Teams were amalgamated at this time to ensure consistency and co-ordination of both system requirements (known as the HASEX). A 12 month meeting schedule was issued and progress monitored via the HASEX team members.

The Company identified 40 aspects, each of which was evaluated for its consequence and likelihood. Annual objectives were identified and five key objectives were established for 2005 and a further five for 2006 with targets, responsibilities and timeframes for review and achievement. In addition, targets successfully achieved are formally monitored to ensure further progress and results.

### Actions Training

Education, training and awareness of staff are an integral part of Penn's Green Dragon Environmental Standard®. The HASEX team has become a highly trained, specialised team and the activities of this group provide guidance for the Executive Committee, through the Director of HR, enabling senior management to determine future policy and give direction through strategy. Almost the entire workforce has had environmental awareness training, waste update training and COSHH training and several members of staff have achieved recognised qualifications. The considerable achievements of Penn in improving its environmental performance can be attributed to a large extent to the level of training of the workforce.



## Waste and Recycling

The monitoring and review of waste streams has been performed since the initial EMS review and waste for incineration is quantified by weight as well as cost. Education and training of individuals is key to creating a culture of positive waste management. Waste products are considered in 3 separate outfalls in line with processes and impacts:

- waste to the air;
- waste to the ground;
- waste to the drains.

Air exhausts are filtered, monitored and controlled; components associated with air handling and dust extraction being treated as hazardous waste.

Hazardous waste is either treated at Penn and put into the foul drain with permission of Welsh Water or is collected at site and sent to a licensed company for incineration.

Waste solvents, microbiological arisings, sharps and some special production waste are contained for ultimate incineration.

Segregation of non-hazardous wastes has achieved positive results with wood, paper, cardboard, metals, glass and suitable plastics removed for recycling. Over the past few years Penn has focussed a considerable amount of time and effort on improvements in waste management and recycling, including re-use of some materials. An audit plan of final disposal sites is carried out.

## Energy

Energy efficient lighting and motors have been installed; Personnel have been made aware of the need to conserve energy; Energy efficient equipment has been purchased; Penn has purchased "cleaner" electricity that is generated from high efficient combined heat and power sources (CHP).

## Water

Reductions in water usage have been achieved over the past 3 years in spite of a significant increase in business

activity and headcount through a campaign of awareness raising.

## Transport

The delivery and collection of certain products, such as some lab supplies, is now undertaken each month instead of each week.

The reduction in waste to landfill has also resulted in fewer deliveries/collections of skips.

There is a policy of replacing company vehicles with diesel models.

## Successful Outcomes

Penn achieved and retained Green Dragon Environmental Standard® registration at Level 5. ISO14001 certification was confirmed in January 2006.

In October 2006 Penn won the 2006 Wales Business & Sustainability Award for EMS (for businesses with over 50 employees). In the same month, Penn won the Blaenau Gwent Council Environment Award for Business.

Achievements (from a 2003 baseline)	2004	2005	2006	Total for 3 years
Reduction in waste to landfill	35%	68%	27%	85% (53 skips)
Hazardous waste reduction	11.5%	62.8%	0	67%
Resulting cost savings	£30k	£18k	£20k	£68k
Reduction in water usage	6.9%	3.14%	2%	11.6% - 250m <sup>3</sup>
Reduction in CO <sub>2</sub> emissions	-	12%	0.5%	12% - 240 tonnes
Increase in recycling of wood, metals and plastics	5 skips	240% (18 skips)	94% (35 skips)	700% (58 skips)
Staff development, ie promotions/transfers of workforce	29.5%	38%	48%	48%
Training - no. of staff at NVQ	28	39	40	40
Increase in headcount	3.5%	5%	2%	11%
Increase in turnover	29%	6.8%	16.5%	61%

In achieving its progress to date, Penn has worked closely with ARENA Network, Carbon Trust, Blaenau Gwent County Borough Council, Environment Agency, Go Wales, DELLS, Welsh Assembly Government and the Wales Quality Centre. The company is part of the Inside Welsh Industry benchmarking best practise programme and is a WAG Kb4b organisation. The company also works very closely with local schools, colleges and universities and actively supports various charities.

*"In a climate where environmental legislation is high on the global, political and indeed business agenda, it is increasingly important that we all do what we can to help mitigate climate change and preserve the local environment in which we work.*

*As a Company, we have made great strides over the last few years and appreciate that having a plan in place to minimise the long term effects of climate change is not only good for the environment, but is ultimately good for business too, helping to deliver a*

*competitive advantage for the future. A highly trained workforce is essential to achieving and sustaining this success."*

**Valerie Ellis, Director of HR and HSE.**

Visit [www.greendragonems.com](http://www.greendragonems.com) or [www.arenanetwork.org](http://www.arenanetwork.org)

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