

## Staffordshire Business & Environment Network Business Case Study

### Resource Efficiency Case Study Johnson Tiles

#### Business benefits:

- ✓ 42 million kWh of energy saved each year
- ✓ 20,000 tonnes of ceramic waste diverted from landfill each year
- ✓ 1,250 tonnes of virgin timber saved annually through the re-use of pallets on site
- ✓ 92% of the company's packaging is from recycled materials and all cardboard and plastic wrapping waste is sent for recycling
- ✓ 32,000m<sup>3</sup> of water is re-used on site each year

#### Background:

Johnson Tiles is the leading manufacturer and supplier of ceramic tiles in the UK, with a long history of market leadership and industry production development. The company's products are used in a wide range of commercial and non commercial projects and they supply ceramic tiles to almost every country in the world.

The company operates a fully automated production facility on a single integrated site in Stoke-on-Trent. The factory employs over 400 people and produces over 5 million square metres of ceramic tiles for use in the UK and overseas markets.

Johnson Tiles has had a longstanding commitment to environmental management and have had a formal environmental policy in place since 1992. The company were the first ceramics

company within the whitewares sector to gain certification to ISO14001 and since then have received several business awards for their environmental achievements. The company has been a member of Staffordshire Business & Environment Network since 1999.

#### Resource Efficiency at Johnson Tiles

Johnson Tiles has adopted a culture of resource efficiency on site where the efficient use of all materials, supplies, energy and transport is promoted. As a result, the company has made significant financial and environmental savings in a number of areas as summarised below.

#### Energy Saving

A number of energy saving measures have been implemented throughout the plant including speeding up kilns, changing CRT monitors to flat screens, switching from twice fired to once fired production, using automatic light sensors to low usage areas, and re-using kiln exit heat. These changes have realised significant energy savings of 25% per tonne of ceramic tile produced which equates to 42 million kWh per year.

#### Re-Use of Materials

Used pallets are utilised within the factory and for deliveries. The company purchases second hand pallets and also repairs damaged pallets where possible. Annually this saves approximately 1,250 tonnes of virgin timber.

The company also re-use 90% of the glaze and pigment transportation buckets that are used on site. The company uses over 10,000 plastic glaze buckets in their factory which gives a saving of 5 tonnes of plastic per year.

#### Recycle

Each year Johnson Tiles recycle 20,000 tonnes of ceramic waste from their own production processes and those of 14

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other local ceramic manufacturers who deliver ceramic waste from their own production plants for re-processing at the Stoke-on-Trent factory. The ceramic waste is ground to a suitable size and added to standard ceramic materials to create tile bodies. These recycled materials comprise on average 25% of the raw material but can be as high as 36%. Recycling the 20,000 tonnes of ceramic waste annually diverts 24,000 cubic metres from landfill. In addition, it is estimated that 235,000 miles of HGV journeys per year using 133,750 litres of diesel (360 tonnes of CO<sub>2</sub>) are saved on the transportation of raw materials by using this recycled material.

### **Packaging**

92% of the content of the company's packaging is from recycled materials and all waste cardboard and plastic wrapping waste is baled on site and sent for recycling.

### **Water Efficiency**

In the company's body preparation area 30,000m<sup>3</sup> of water is re-used each year. In addition, the company has also removed water from other parts of the production process which has realised additional savings of 2,100m<sup>3</sup> of water.

### **Continuous Improvement**

Johnson Tiles has recognised the financial and environmental benefits that can be gained through adopting a systematic approach to resource efficiency and is committed to continuously improving its performance going forward.

#### ***Comment about SBEN?***

***"SBEN provides top quality, cost-effective environmental training and support for companies of all sizes."***

***Mark Thompson  
Health, Safety & Environmental Officer  
Johnson Tiles***

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