

Toyota Motor Manufacturing (UK) Ltd - achieving zero waste to landfill

Sector: Transport

Tools and techniques: Waste management

Awards for Excellence 2004 - Big Tick winner. The Shields Environmental Award

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TMUK set the challenge of reducing waste to landfill generated per vehicle from 8.5kg in 2001 to zero by 2005.

Processes: in December 2000 the company created an environmental action plan with the aim of achieving the best environmental performance in the UK of all car manufacturing plants. The plan, which covers the 2001-2005 period, outlined strategic environmental performance goals based upon ongoing benchmarks and key performance indicators.

For Toyota, environmental protection is one of the keys to sustainable development. TMUK set itself a number of environmental targets, including waste reduction and resource conservation, reduction of substances of environmental concern – reducing the release of volatile organic compounds (VOC) and substances of concern (SOC) during the manufacturing process.

A further target was saving water resources across the plants and reducing energy usage per car and plant emissions which impact on global warming. TMUK approached its challenging waste reduction goal in three stages. First reducing waste volume, secondly waste that couldn't be eliminated was to be used or recycled and thirdly waste that could not be re-used or recycled had to be treated to reduce its environmental impact.

A large contributor to landfill waste was sludge from the paint department. A study of waste showed that it contained a large amount of water. The introduction of a centrifuge reduced the water content of the sludge and then pumped the water back into the paint ponds for re-use. After investigation it was identified that the remaining dried residue could be used in the production of cement.

This innovative use of the waste process not only avoids landfill but also conserves natural resources for the future by reducing the amount of natural aggregate extracted from quarries each year.

Further large scale improvement in waste reduction have been the utilisation of high calorific hazardous waste, such as paint sealer for thermal treatment with energy recovery.

Key environmental responsibilities are included in TMUK's induction and training programmes and all of business partners to make environmental protection a top priority, by issuing environmental purchasing guidelines.

TMUK was the first UK based car manufacturer to gain ISO 14001 accreditation for its management processes in 1996. Suppliers have also been encouraged to achieve ISO14001.

Impact:

- As a result of the environmentally focused activity general waste was reduced by 2.1 kg per car, contributing 25 per cent to the waste reduction target.
- Paint waste was reduced by 4.7 kg per car, contributing 55 per cent to the waste reduction target.
- Hazardous waste was reduced by 1.7 kg per car, contributing 20 per cent to the waste reduction target.
- In total this activity has eliminated 1818 tonnes of waste committed to landfill per year

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