



Ware 4 Bins & Recycling

Bins, Trolleys, Recycling and Waste Containers

Is Recycling Good for the Environment?



WRAP Life Cycle Analysis of recycling compared to incineration and landfill

There have been on-going debates over the extent to which recycling materials genuinely benefits the environment. Critics will often suggest that more energy may be used in transporting materials to the facility than is saved through the process of recycling.

In response to such claims, **WRAP (the Waste & Resources Action Programme)** commissioned a major international research project, conducted by the Technical University of Denmark and the Danish Topic Centre on Waste. It was the largest and most comprehensive international review of its kind.

The study was based on Life Cycle Analyses (LCA), which calculate the environmental impacts of a material or product throughout its lifetime. LCA are an internationally accepted method for reviewing environmental impacts and hundreds were selected for the study. 55 of the most expert LCA were then chosen for a detailed study to compare their findings.

Seven key recyclable materials were used in the study; paper / cardboard, plastics, glass, wood, steel, aluminium and aggregates.



Different waste methods ('scenarios') were compared for each material. For example, 'Recycling vs. Landfill', 'Recycling vs. Incineration', and 'Incineration vs. Landfill'. From the scenarios that included recycling a **staggering 83% of them favoured recycling over landfill or incineration.**

The study also assessed the relative greenhouse gas savings associated with current UK levels of recycling materials. It was found that **recycling these materials saves 10-15 million tonnes of carbon dioxide equivalents per year** compared to landfill and incineration with energy recovery. **This equates to taking 3.5 million cars off UK roads!**



'The message for policy makers and practitioners is unequivocal. Recycling is good for the environment, saves energy, reduces raw material extraction and combats climate change.'

Ray Georgeson MBE
Director of Policy and Evaluation, WRAP