

*News release February 2000*

## **NEW PLASTICS RECOVERY AND RECYCLING RESEARCH PROGRAMME**

A major new research programme, examining the potential for recovering and recycling post-consumer waste plastics has been announced by the University of Brighton.

The research is focusing upon techniques and technologies available for recovering and recycling the plastic fraction of two specific post-consumer waste streams:

- household waste (such as plastic beverage containers)
- the by-product of End of Life Vehicle processing

The 2-year project, financed under the Landfill Tax Credits Scheme, is being supported by Viridor Waste Management (formerly Haul Waste) through the Greenbank Trust, in conjunction with the registered Environmental Body at Brighton University. The third party donation is being provided by the automotive industry *via* its co-operative recycling initiative, the Consortium for Automotive Recycling (CARE).

This important new initiative is being managed by a dedicated team within the School of the Environment at Brighton University, headed by Dr. Marie Harder (Chief Executive of the Brighton Environmental Body), along with an advisory committee comprising representatives from the University, the automotive industry (CARE) and the metals recycling industry (the British Metals Federation). The team responsible for carrying out the research has now been assembled, with the long-term consultant to the CARE group, Dr. Charles Ambrose managing the ASR project and Dr. Richard Hooper, a polymer chemist, leading the household waste plastics project.

An information pack is being compiled and will be available in March 2000. In the meantime, further information can be obtained directly from the following people:

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## ***Household Waste Plastics***

Following on from the advances made in recovering commercial packaging waste (by obligated companies/ compliance schemes), the recycling of certain fractions of the household waste stream is becoming increasingly important. In particular, significant improvements need to be achieved by those materials which are not currently targeted by 'bring' and 'kerbside' schemes, or exhibit low success rates. The need to be able to separate and recycle the plastic fraction of household waste is paramount. This study aims to address the issues involved in the development of plastic recycle streams suitable for commercial applications by:

- Characterisation of the raw materials obtained from the plastic fraction of household waste
- Formulating recycle specifications using either 100% post-consumer plastic or blends with virgin material
- Assessing the physical and chemical properties of the recycle and new blended materials
- Ensuring adequate quality and consistency of recycle

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## ***Shredder Residue***

The major by-product of End of Life Vehicle processing, shredder residue (or 'fluff' as it is commonly known) constitutes the non-metallic fraction of shredder feedstock that remains after recovery of the valuable ferrous and non-ferrous components. This waste product currently amounts to approximately 25% of feedstock by mass, and is disposed of to landfill in the UK. Under the proposed European Union Directive on the Disposal of End of Life Vehicles such disposal will be much more restricted. The initial goals of the study include:

- Chemical and physical characterisation of shredder residue arising from ELVs
- Information gathering with regards to ongoing investigations with shredder residue in other countries and other relevant waste separation processes
- Identification of the primary 'fluff' constituents, and development of methods for extraction of fractions that could be targeted for separation and mechanical recycling
- Identification and characterisation of the nature of any potential contaminants in shredder residue that might restrict the final end-use of various derived fractions
- Evaluation of the quality of recovered materials in relation to specific performance criteria for a range of applications, investigating blending if/ where applicable

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