

**Research Project: Environmental Protection & Justice: Waste Surveys and Management.**

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**Background:** To a large extent the unsustainability of our existing systems of consumption and production, and our industrial supply chains, relates to their linear nature (as opposed to the more resource efficient and cyclical systems found in nature) and role in generating waste. Waste is an important issue for the management of business relationships since the responsibility for waste is influenced by the design stages of product and process development, the management of businesses and their supply chains, the behaviours of end consumers and the handling of waste by commercial and public sector waste management enterprises. BRASS research sought to understand how to reduce waste within the key industries it focused on including automotive, electronics and food, and it also did work in relation to waste as an industrial sector. In many cases the emphasis was on finding ways to have waste treated both as a sustainability, and a strategic, issue and not simply as an operational/technical one. This project involved two major waste management surveys, one relating to commercial and industrial waste, and one to domestic waste representing both elements of the sustainable waste management strategy.

**Aims & objectives:** To understand the dynamics and interactions amongst key stakeholders in relation to industrial and domestic waste streams and in relation to particular measures regarding waste such as European Waste Directives and particular waste management options. These stakeholders included local and central government, producers, NGOs, trade associations, retailers, consumers, and local communities. The main objectives were to:

- Collect data and analyse trends across Wales relating to waste material production from different industrial sectors and from different locations;
- Identify particular problem materials, issues, areas or waste management problems that need to be brought to the attention of industry and policy stakeholders;
- Identify the requirements needed to ensure appropriate provision of facilities for more sustainable and integrated management of commercial and industrial waste;
- Support and inform the Welsh National Waste Strategy, the UK Waste Strategy, and the reporting requirements of the EU including using the Industrial Waste Arisings survey as the first major application of the (then new) EU waste classification system;
- Examine household waste management practices and the factors affecting them including relationships between purchasing behaviours & waste creation/management;
- Test options and gain feedback from householders on the effectiveness of particular recycling schemes;
- Find the most effective ways to engage householders to recycle and minimise their waste.

**About the research:** In 2002 Cardiff County Council commissioned BRASS to undertake research into the waste management and purchasing practices of householders involved in a new kerbside recycling scheme in Cardiff, a city of over 300,000 residents. The research compared and analysed householders' opinions of the scheme, as well as exploring their attitudes towards recycling, waste minimisation and waste in general. Over 9,000 questionnaires were sent to Cardiff households (with a 30% response rate) and nearly 40 in-depth household follow-up interviews were conducted along with interviews of key stakeholders, such as regional and national government officials and civil society groups, in order to determine the spectrum of opinions on all aspects of household waste management policy and behaviour.

Then in 2003, BRASS was commissioned to conduct the *Wales Commercial and Industrial Waste Arisings Survey* by Biffa and the Environment Agency Wales as part of the wider national survey conducted by Defra. For this 13 waste surveyors visited over 2,000 companies, representing the

largest commercial and industrial waste survey conducted in Wales. A broad spectrum of commercial and industrial sectors was identified from small, medium and large-scale companies and organisations. Particular sectors identified were those with a strong impact on the Welsh economy, this included both light and heavy manufacturing, food, leisure and tourism and even public sector departments and organisations. Nearly 11,000 waste streams were collected from a random sample of companies supplied by ONS.

**Results and outputs:** For the Waste Evaluation Survey, the key findings reinforced the importance of convenience as a key driver of recycling behaviours although there was evidence of a growing sense of ‘consumer social responsibility’ in relation to dealing with consumer waste. There was some limited evidence of waste minimisation behaviour is taking place (although not to the same extent as recycling) with householders feeling powerless to reduce many waste streams. The amount of packaging on products was the most frequent complaint. However for certain items, such as plastic bags and junk mail, respondents felt they were able to minimise without major difficulty.

The main results from the Waste Arisings Survey were published in the report '*Commercial and Industrial Waste Survey Wales 2003*', key insights included that many businesses were unaware of Duty of Care Regulations; little recycling was carried out due to lack of provisions and facilities from the council and a lack of storage for recycling containers at the premises; the monitoring of waste expenditure was not always common practice, especially with smaller businesses, who would perhaps benefit the most from this; the majority of small businesses (under 20 employees) had no Environmental Policy and energy, waste, water, packaging, materials recycling or re-use was not a common occurrence, with usually only one or two of these practices carried out if any.

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**Impacts achieved/potential for impact:** During the Commercial & Industrial waste survey it became apparent that many businesses sought simple guidance and information on waste legislation and waste management. BRASS provided 3 series of business-briefing notes to provide assistance to companies - Series 1 dealt with waste legislation (Landfill, Duty of Care and Hazardous Wastes), Series 2 with specific commercial and industrial sectors, and Series 3 with specific waste types. Both surveys had a very direct feed into policy making, and the data from the waste arisings survey was widely used to assist the waste management sector to enable them to plan appropriate waste management strategies.