EWM Programme

SME Recycling and Source Separation

Investigation Report

August 2006

Definition

A Small to Medium Sized Enterprise is considered to be an independent private company which employs less than 250 people and/or generates annual revenue of less than £50 million.

Introduction

SME's present a unique and challenging problem for the waste management industry committed to increasing rates of recycling.

SME's are a subset of business activity, covering all business sectors – commercial, light industrial, retail and service – except for heavy industry.

SME's are far more numerous than large businesses, and have a considerable impact on most local economies, although, in financial terms, large businesses account for the much the greatest share of GDP.

But there is a wide gulf between large and small businesses. Large businesses have the solace of size – a large company with substantial cash flow can afford the money (even if it is making a loss) to attend to matters that a small company, with a slender and fragile cash flow, cannot. The difference made by the size of revenue stream is that survival is an issue for the small company, but is not in question for the large company.

Small companies collapse and disappear much more frequently than large companies.

The consequence of this is that SME's are not in a position to worry about environmental commitments in the way that large companies might. The concept of Corporate Social Responsibility is applied to large companies, as its name suggests, but rarely considered amongst SME's.

The difference in these basic dynamics dictating the nature of their existence means that the two need to be considered separately, and studied separately, in relation to recycling and waste management. They are controlled by different attitudes and behaviours, different motivations and priorities, which need to be researched and understood separately before interventions can be expected to be effective. To date, the business community has been researched, monitored and studied as if it were an homogeneous whole, and thus the data fails to separate the SME population from the rest of the business universe.

This report now deals with the SME environment, and asks how to improve this situation.

It forms part of the EWM programme, and has been instigated by The Environment Agency and Adur District Council. It is an initial exploration of the issue in the context of the EWM programme, rather than a formal report.

Objectives

- To gain a better understanding of how commercial waste is classified in each partner region.
- Share best practice
- To identify innovative ways of improving recycling opportunities for commercial premises, which can be replicated in the regions.
- To identify opportunities for improving trade recycling rates in partner countries.
- To explore the possibility for a generic definition of commercial waste across Europe.
- To identify how much we know about what is commercial waste to see how much is potentially recyclable.

Methodology

An informal methodology, using a self-administered questionnaire issued to all the EWM partners, was applied. Responses were received from six of the partners, in July/August 2006. The questionnaire looked at the following areas: -

- How SME waste is measured and categorised in partner countries i.e. if household and commercial waste from small and medium size businesses is collected and recycled together.
- What are the constituents of SME waste?
- Are recycling opportunities offered to business – either by the local authority/municipality or by private companies or charities?
- What incentive/deterrents partner countries have to encourage businesses to minimise and recycle waste?
- How much waste is/could be redirected away from landfill/thermal treatment?

Conclusions and Recommendations

The nature of this project reveals the limitations in the current state of knowledge regarding SME waste and recycling behaviour. None of the partners has a system for isolating SME's and monitoring their behaviour in such a manner as to distinguish it from that of larger businesses. Consequently it is impossible to identify trends, let alone explain them.

As a result, the **conclusions** of this exercise are that it is not capable of fulfilling its objectives, beyond observing that current SME behaviour currently is governed by legal requirements in each partner region, and that these requirements are assumed to be honoured by SME's. Each partner region has a Waste Strategy and Plan, which includes trade waste. Each sets targets. Each assumes these targets are being achieved.

An important exception to this does emerge from the evidence gained in this study. There is an important difference between those regions in which commercial collection of business waste is permitted, and the established public sector waste management service is in competition with private sector operators; and those regions where the public sector waste management service is the sole supplier of a statutory service to business. Where commercial operators are allowed to compete, a different market-led dynamic is introduced to the business behaviour, whereas compliance characterises business behaviour within a monopolistic public sector statutory framework. However, not enough is known about this difference, and its effects, to be sure of its importance or impact in anything other than vague terms.

The main conclusion therefore is that insufficient knowledge exists, and that more research is required into the baseline data identifying what SME's are currently doing, and distinguishing between their different waste management and recycling practices with sufficient subtlety to note which sectors are performing better, which are performing worse, how these trends are developing, how they are differentiated regionally, and how they are differentiated

economically (including how they relate to the success or failure of the companies concerned). Accompanying this, research is needed at a qualitative level to understand the barriers to SME recycling, and why it is not happening more.

Thus the **recommendations** resulting from this exercise are that a research standard is established for monitoring SME recycling and separate collection, as well as waste management, on a common basis that can be applied across Europe, to provide baseline statistical data. This will enable a clear picture of what is happening, as well as a means of tracking how it changes over time. Accompanying this, it is recommended that a qualitative research system, transferable across Europe, is established to understand why SME recycling is happening, or not happening, and how it could most efficiently be improved or changed.

Until these recommendations are implemented, knowledge concerning the behaviour of SME's with regard to waste and recycling will always be sketchy and inadequate to the purpose of deciding policy for them, let alone regulating their behaviour, effectively.

Output

The projected output of this study was to be a standardised comparison of existing practice in the partner regions with regard to business waste. It was hoped that the research would indicate measures taken to encourage separate collection and recycling of SME waste streams in partner regions, and outline best practice in the current climate within the partner regions. This would have had the value of providing a means of measuring and benchmarking current activity, and an ongoing measurement standard by which performance can be judged in future, the greatest value of which would be to establish the context for improvement, and thus help in developing innovative strategies by which SME recycling rates can be improved.

However, the output of the EWM programme as a consequence of this work cannot be as originally envisaged, owing to the absence of any data, even of the most basic kind. This data is required urgently, as noted above, to provide a baseline, from which benchmarking and best practice can be measured, and future performance judged. Without this data, reliable judgements of SME recycling and source separation cannot be made, on the basis of sound evidence.

Hence the output of this study for the EWM programme is proposed to be **the design of a linked research programme** required to establish the baseline data concerning SME waste and recycling performance in different European regions, an **identification of prospective partners** and **proposals for funding sources**.

Note
The design must start with a comprehensive literature and research review of everything published in relation to trade waste and SME recycling and source separation in Europe (and beyond). It should be noted that, although this has not happened as part of this exercise due to the limitations on resource and time, that documents have been reviewed which are both useful in themselves, but also emphasise the absence of any core data on SME's. An example of this is the interesting and useful work for the Greater London Authority, *Best Practice Guidance: Trade Waste Recycling (March 2005)* produced by Enviros Consulting Ltd. This serves, most of all, to highlight the absence of data or knowledge, but at the same time provides some useful background context to trade waste recycling in the UK.

Detailed Findings

1. Current Knowledge concerning SME Waste and Source Separation

Knowledge of SME behaviour in Debrecen is non-existent. It is assumed that SME's are abiding by regulations laid down for business.

In Dundee, services are provided for separate collection of trade waste, but there is no distinction of SME's within the definition of trade.

In Friesland, there is also no distinction between business generally and SME's specifically, but – interestingly – there **is** a sanction in favour of smaller companies, allowing them to avoid the legal obligations for business waste if they place a disproportionate financial burden on the company. This indicates a readiness to recognise and distinguish between different companies on the basis of size.

In the S-East of England, the Environment Agency has conducted detailed research of business waste, but this makes no distinction between companies of different sizes. SME's are considered within the business community in general, and not separated from them in any way.

2. Responsibility for Monitoring SME Waste and Source Separation

The Local or Regional Authority is responsible for monitoring trade waste in Hungary, Genoa and Scotland, but in England and The Netherlands, Government agencies have been charged with responsibility for monitoring trade waste. In England, the Environment Agency and Defra (the Government Ministry) have taken responsibility for producing trade waste surveys.

3. Current Business Waste Categorisations

In Scotland "controlled waste" is governed by the Controlled Waste Regulation 1992 and controlled waste is categorised into: household; commercial; industrial; and clinical. Scotland does not further categorise business waste other than by material type.

In England, business waste is either Industrial Waste (waste from factories and workshops) or Commercial Waste (waste from individual traders, wholesalers, catering establishments, shops and offices, etc.). A small amount of agricultural waste may also fall into the SME category. The categories depend on the process and the premises producing it.

In Italy, waste categorisations are based upon the European Waste Code (EWC). According to these regulations, all wastes are classified by the producers with an EWC code that is attributed based upon the origin of the waste (and therefore based on the activity that produced it) and based upon the danger.

In The Netherlands, we call the waste material most comparable to SME waste, HDO waste. Translated it means waste from offices, shops and service sector. Also waste from industry that is not process related is categorised as HDO waste. Disposers of HDO waste are mostly:

- Wholesale companies
- Retail
- Offices
- Shops
- Repairshops
- Hotels
- Restaurants
- Café's
- Public utility companies
- Transport companies
- Storage companies
- Communication companies
- Retirement homes

The waste material itself can be:

Waste	Recycling target	Guideline threshold
Residual waste	50%	
Organic waste	50%	
Paper/cardboard	70%	always

Glass	100%	30 kg/week
Plastics	35%	foil always / buckets > 240 ltr/week
Metals	100%	2000 kg/a
Woods	50%	2000 kg/a
Textile	50%	2000 kg/a
Hazardous waste	100%	always
Asbestos	100%	always
Waste electronical equipment	100%	always

4. Business Waste Collection Systems

In Hungary, producers give waste to authorised collectors, which utilize or dispose of it.

In Scotland, business waste is collected by the Local Authority's fleet of refuse collection vehicles. Businesses may present their waste in wheeled containers, skips, plastic bags or loose. Relevant staff from the Waste Management department of the Council advise businesses on how they should present their waste appropriately. Businesses have no obligation to use the commercial services of the local authority and may choose to use the services of a privately run waste disposal company. Hence Local Authorities compete with private waste disposal companies for contracts with business customers for collection and disposal of their waste. All businesses in Scotland have a "duty of care" obligation in line with relevant legislation.

In Italy, waste can be collected by a private commercial company in a “temporary deposit”, or in a well-identified site within the area where it is produced, while waiting to be sent to be recovered or to be disposed of. Obviously, the dedicated area must meet specific requirements, and the waste must be deposited in compliance with what is required for each type of waste (this type of collection does not require any authorisation from competent bodies).

In Friesland, Omrin collects business waste in multiple ways depending on the material concerned. Most waste collected is residual waste, which we collect by using containers.

Residual waste	Movable containers between 240 and 2500 litres, Logistical containers between 6000 and 30000 litres. Containers (compactor) between 10000 and 25000 litres. Underground containers
Swill (kitchen waste)	Barrels (25 and 50 litres)
Waste kitchen oils/fats	Barrels (60 litre)
Glass	Containers (240 and 400 litres) Bottle banks (800 and 3000 litres)

Some of the containers are used for more than one waste material e.g we also collect building and demolition waste, green waste, wood etc.

In England, business waste is usually collected by Refuse Collection Vehicles or Skip trucks. A small amount may be delivered to the disposal site by the businesses themselves or be collected loose in vans/ trucks. Waste is usually stored in wheeled bins and sacks at the business site.

5. Business Waste Measurement Methodologies

Business waste is measured throughout the EWM partnership by weight or volume. Most business waste is measured in tonnes. Some may be described by volume, but there are good conversion factors to convert to tonnage.

In Hungary, business waste is measured with a platform scale in terms of weight.

In Scotland, all waste collected by Local Authorities is measured (mainly through use of weighbridges). Waste collected by Local Authorities is categorised as household, commercial

or industrial, and separated by material type. This is required in order to complete data returns to the Scottish Environmental Protection Agency (SEPA) and the Scottish Executive.

In Genoa, the quantity of special waste produced by business can be estimated according to the results from the analysis of data gathered from the MUD declarations (environmental declaration form) that are presented by the producers of waste. The companies or bodies that are obliged to present an MUD are those that have produced or sent special dangerous or non-dangerous waste for recovery or disposal, that derive from artisan or industrial manufacturing and that, in the case of artisan businesses, have more than 3 employees, plant operators. Also Municipalities, Mountain Communities or Commune Consortiums are obliged to present MUD declarations both for wastes that they produce as service activities (limited to dangerous wastes) as well as those collected within the territorial borders of authority.

6. Business Waste Stream Separation Measurement Methodologies

The measurement of separate business waste streams seems to be sporadic and inconsistent among the EWM partners. For example, in Hungary, mechanical components are measured by selection (waste analysis), and chemical and other components are measured in the laboratory. In Genoa, they are not currently able to define the separate waste flows. In Friesland, separation of business waste is not measured on a regional level. In Scotland, all waste is categorised as household, commercial or industrial, and separated by material type, but not by origin.

In England, however, all waste is normally described by either the process that produces it (publishing and printing waste), the main components (paper, card, metals, chemicals), and/or its properties (biodegradable, hazardous, inert etc). The use of European waste codes is patchy and it is common for business waste to be described as mixed, or in the very general terms of the process producing – publishing and printing. There have been some local trials to measure the components of business waste but these are small scale and business waste is not regularly monitored.

7. Business Recycling Incentive Schemes

Schemes specific to business waste are in differing stages of development among the EWM partners. In some cases, such as Hungary and Genoa, the approach to business waste is contained in the regional or national waste plan. In each case this defines targets and expectations, as well as infrastructure and collection systems, which Government will instigate and with which business is expected to comply.

In Dundee and The Netherlands, more has been done to encourage business to consider recycling. In Dundee, the Local Authority offers separate recycling collections to businesses for source separated materials. The price charged for collection of source separated waste for recycling is lower than the price charged for collection of mixed waste for disposal. This acts as an incentive for businesses to source separate their waste for recycling. This is backed up by national awareness raising initiatives.

In The Netherlands, prevention and separation of business waste really started around 1990 with the PRISMA project. This program focuses on business. In 1997 the program ‘Separate collection of business waste’ started. Currently another program is trying to improve waste prevention and separation. This program is called ‘With prevention towards sustainable development’. This program focuses on what municipalities, district water boards and provinces can do to improve sustainable development.

In the S-East, there are some local initiatives to stimulate separate collection but these are small scale and will depend on local funding. An example is Adur District Council, where two trials are currently in progress, one for SMEs and another for an Industrial estate. The cost for collection and disposal is the same as normal refuse disposal.

In England, the recycling of business waste is normally market-led and depends on the amount of money obtained for the recyclate. Where returns are good, and the market is strong, waste collectors will have an incentive to arrange separate collection from business. Scrap metal is a good example of a strong market with a secure collection system. Another is

waste paper, where large users, such as printers, will make arrangements to have their scrap paper collected for recycling. Some waste treatment sites will separate mixed waste for recycling, but this is usually dependent on the degree of contamination.

Throughout the UK, the National Industrial Symbiosis Programme (NISP) offers advice to business on all aspects of resource efficiency, including waste minimisation and recycling. It is aimed at businesses of all sizes but actively encourages SMEs. NISP is part funded by Defra through its Business Resource Efficiency and Waste (BREW) Programme, which itself is funded by Landfill Tax money.

8. How successful are they?

In all areas, the response seems to be encouraging, but – as is characteristic of the problem relating to business waste generally and SME's specifically – there is no robust data to support this observation.

In Hungary, it is reported that the level of development is still increasing. In Dundee, the financial incentive for businesses to source separate their waste is very successful at encouraging businesses to recycle their waste. In England, local programmes are still being evaluated but are looking promising, whilst in The Netherlands, it is difficult to determine the extent to which the prevention objectives are being achieved. To do this it would be necessary to work out how much waste would have been generated without a prevention policy. An indication can be obtained by comparing the growth in waste with economic growth. Since 1990 the volume of business waste generated has grown much more slowly than GDP. Waste prevention policy undoubtedly contributed to this.

9. What plans are there to improve business waste collection for recycling?

On the evidence provided by the partners, it is clear that there are no formal plans that are being introduced in the near future. This relates to business waste generally, of which SME's are inevitably a subset.

In the Gyula region, because of its agricultural character, the production of business waste is not typical. Mainly technological waste and waste as a result of depreciation is produced. Collection and reuse of them could be solved with the constantly developing disposal capacities.

In Dundee, the Local Authority is constantly monitoring its services and developments within the industry in order to identify any possible improvements to our business waste collection services. A sales strategy/plan is also in place.

In the Netherlands producer responsibility is introduced for packaging waste. When this is in place it will probably have a large impact on prevention and separate collection of business waste as well.

In England, at the moment it is left to the free market to determine how much business waste is recycled. The market compares disposal to recycling costs. Landfill tax will rise at £3 per tonne per year until it reaches £35 per tonne in 2011. It is likely that at around this time a 'tipping point' will be reached whereby it becomes cheaper to recycle rather than dispose of in landfill. The market will then seek to introduce more schemes for separately collecting business wastes for recycling. If local trials prove that recycling for businesses is financially feasible then it will be continued in the future.