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GREATER LONDON AUTHORITY

BEST PRACTICE GUIDANCE: TRADE WASTE RECYCLING



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1. INTRODUCTION	4
1.1 Project Aims	4
1.2 Context	4
1.3 Why Recycle Trade Waste?	4
1.4 Research	8
2. TRADE WASTE RECYCLING ACTION PLAN	10
2.1 Key Considerations	10
2.2 Summary and Action Plan	10
2.3 Research	12
2.4 Contracts	12
2.5 Target Businesses	13
2.6 Markets	14
2.7 Materials	15
2.8 Resources	16
2.9 Costs and Funding	18
2.10 Pilot Scheme	21
2.11 Scheme Promotion	22
2.12 Scheme Roll Out	24
2.13 Monitoring, Measurement and Feedback	24
2.14 Potential Issues and Solutions	25
2.15 Other Considerations	25
3. CONTACTS & USEFUL INFORMATION	29

APPENDICES

- 1. CASE STUDY SUMMARY MATRIX**
- 2. CASE STUDY PRO FORMAS**

1. INTRODUCTION

1.1 Project Aims

The Mayor's Municipal Waste Management Strategy¹ includes policies and proposals regarding the identification and dissemination of best practice on waste management issues to improve performance of waste collection, recycling and diversion from landfill. The GLA's Best Practice Scoping report² identified that there is a need for further guidance in a number of key waste management areas, and that trade waste recycling is a priority.

This document aims to develop the opportunity that trade waste recycling presents through establishing best practice guidance, which is based on researched case studies and builds on the lessons learnt by authorities who are operating successful trade waste recycling schemes. The guidance aims to identify the key considerations which need to be taken into account when implementing a trade waste recycling scheme and develops the considerations into a practical, action-oriented plan.

1.2 Context

For the purposes of this project, 'trade waste' is defined as 'the commercial element of municipal waste'. This includes trade waste which is collected on behalf of local authorities by a private contractor or a collection authority.

Only 8 London boroughs currently offer a trade waste recycling service to businesses in their borough, collecting single materials or combinations of paper, cans, glass and plastics. The City of Westminster has a sophisticated trade waste collection and recycling scheme set up, offering a range of collection products and services. Several Boroughs promote their services by offering to collect some trade waste (paper and glass) for recycling at a reduced rate. Southwark offers a trade waste recycling scheme at reduced rate, collecting recyclables at 40% less than the cost of collections for normal waste. There are a number of other London boroughs looking into the possibility of introducing a trade waste recycling service.

The London Borough of Hammersmith and Fulham keeps its prices under regular review and promotes its trade refuse collection service as widely as possible. However, because many of the large national chains / franchises (pubs, clubs, restaurants and fast food outlets in particular) in the borough have national waste collection agreements with private sector contractors, this often prevents them from providing a service to local branches. In a number of boroughs well known waste collection companies offer to collect trade and recycled trade waste thus competing with the local authorities.

1.3 Why Recycle Trade Waste?

A key driver for the development of trade waste recycling is the Landfill Allowance Trading Scheme (LATS) which sets challenging targets to reduce the tonnage of biodegradable municipal waste which is sent to landfill. Trade wastes count against an authority's LATS targets therefore the recycling or composting of the

1 <http://www.london.gov.uk/mayor/strategies/waste/index.jsp>

2 http://www.london.gov.uk/mayor/environment/waste/best_practice.jsp

biodegradable element of trade waste, diverting it from landfill, presents an opportunity to both increase recycling and move towards meeting LATS targets.

Drivers in terms of policy include the Mayor's Municipal Waste Strategy. In particular, policy 2 identifies the target to recover value from 40% of municipal waste by 2005, 45% by 2010 and 67% by 2015. Proposal 20 encourages waste authorities to fully explore opportunities for trade waste recycling collections.

For those London boroughs that already collect trade wastes the diversion of biodegradable material from landfill by introducing recycling activities for trade wastes gives a positive benefit in terms of LATS compliance. Collecting more trade wastes than previously and recycling a greater proportion of the biodegradable components gives a positive benefit. However, collecting more trade wastes but failing to increase the proportion which is diverted will count against LATS targets. Expanding or developing existing collection rounds and arrangements is likely to be the most cost-effective approach, possibly linking the collection of materials from bring banks to the collection of, for example, card from commercial premises.

The collection and recycling of trade wastes can be an income generator, where some of the costs of recycling can be covered (or even subsidised) by charges for collection and the provision of containers. For many reasons the provision of a service at a loss is unlikely to be acceptable.

Opportunities to reduce heavy vehicle traffic, improve collection services and demonstrate efficiency increases are available from implementing or extending trade waste recycling schemes. Currently commercial and retail premises in a typical business district may receive visits from both collection authority and contractors' vehicles. Often a number of different contractors may visit the separate premises to collect the occupants' commercial or trade wastes. Using a collection authority vehicle to collect more trade wastes from more properties minimises the number of separate visits, one vehicle servicing a greater number of properties per trip or collection round.

Trade wastes comprise a significant proportion of all wastes generated in London. The Environment Agency reported that 4,350,000 tonnes of commercial wastes and 2,740,000 tonnes of industrial wastes were produced in London in 1998-99³.

In addition, the increase in the tonnage of trade waste arisings shows no sign of slowing down. Figures 1 and 2 show the tonnages of commercial and industrial wastes (chosen here to represent "trade wastes") being produced in London and the proportion of these wastes which are reported as recyclables. Of particular value or importance are the more than 500,000 tonnes of paper, card and food waste in each of the commercial and industrial waste streams.

Figure 3 shows that nearly 8% of the co-collected waste stream is recyclable paper and nearly 14% is cardboard boxes. Diverting these materials landfill would equate to the equivalent of over 100,000 tonnes as a contribution to London's LATS targets.

³ Environment Agency (2000) Strategic Waste Management Assessment for London

Figure 1 Commercial waste arisings by waste type (000's tonnes) for London (1998/9)

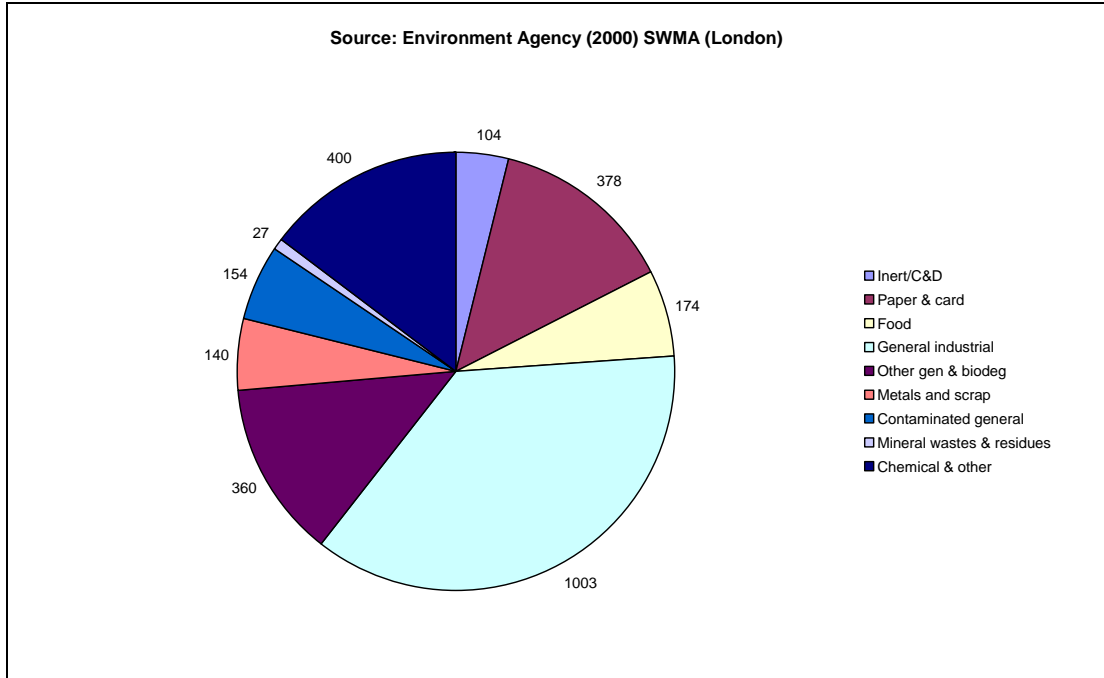


Figure 2 Industrial arisings by waste sector (000's tonnes) for London (1998/9)

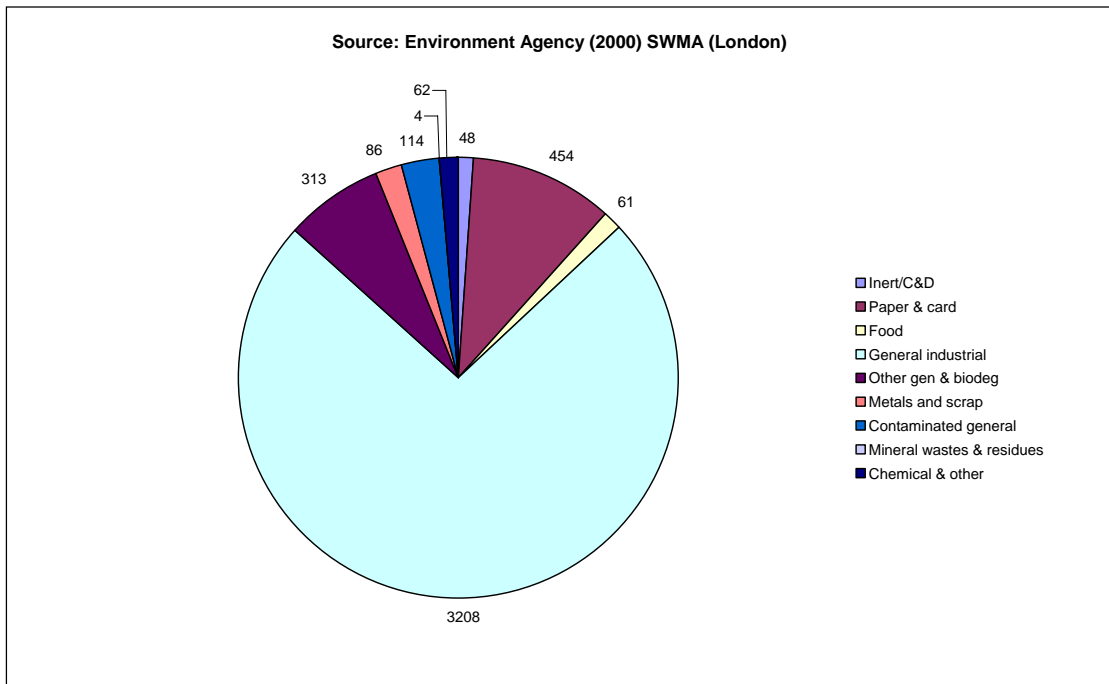
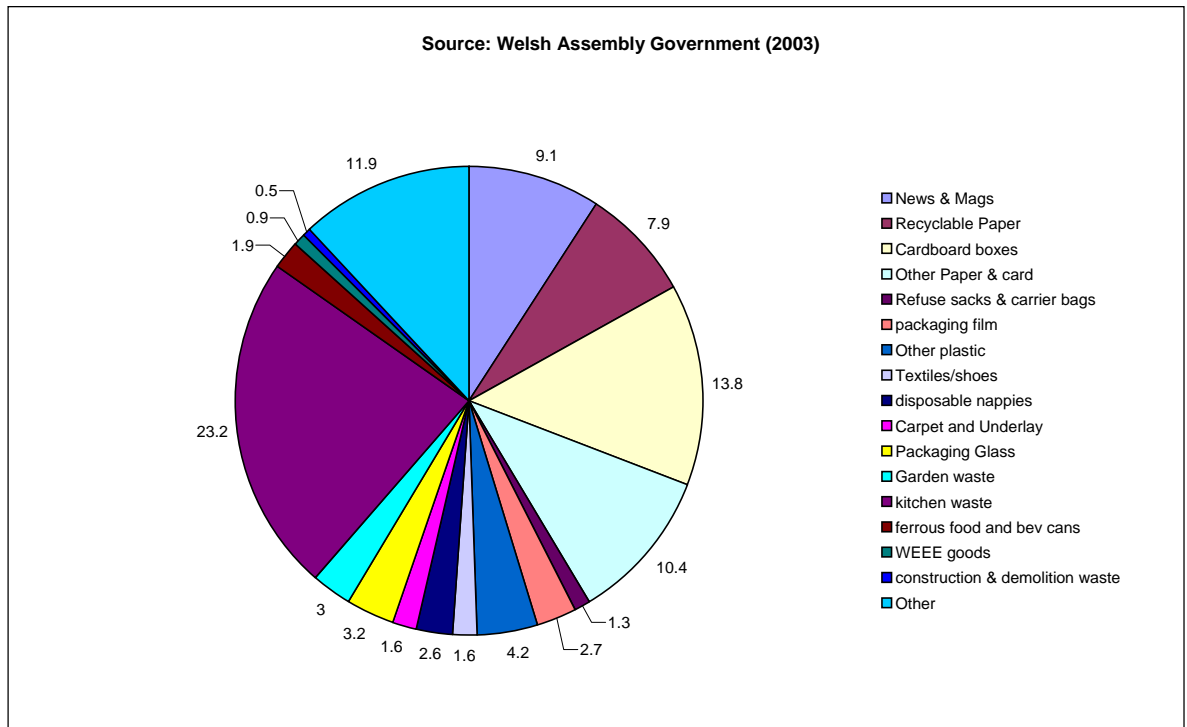


Figure 3 Composition (weight percent) of co-collected trade waste



In addition to pressures from LATS and an increasing tonnage of commercial and industrial waste, authorities are also operating in the context of limited guidance. The focus of much recycling and composting guidance is on household waste. In previous work for the GLA, no guidance on trade waste recycling was found. This guidance seeks to identify actions that have proved to be successful for those authorities undertaking trade waste recycling, in the UK and abroad to assist other authorities establish successful schemes. Understanding the range of options will help ensure the best use of potentially limited resources available to develop schemes.

However the short term approach to LATS compliance, shedding existing trade waste collections by selling or overpricing the service in order to reduce the total amount of biodegradable wastes handled is recognised as an issue. The Mayor of London does not believe that it is acceptable for boroughs to price themselves out of the market for the collection of commercial municipal waste and Defra has also published guidance⁴.

Proposal 50 of the Mayor's Municipal Waste Strategy states that 'The Mayor will require all London waste authorities to identify ways to minimise the amount of unpaid commercial waste contaminating the household waste stream.' One of the key ways for a waste collection authority to effectively control the amount of unpaid commercial waste contaminating the household waste stream is to offer a reasonably priced commercial collection service and to encourage the use of this service through a combination of marketing and enforcement. Offering an over

⁴ <http://www.defra.gov.uk/environment/waste/localauth/lats/pdf/lats-municipalwaste.pdf>

priced service will only encourage commercial waste producers to seek cheaper alternatives, one of the cheapest being placing the commercial waste in the household waste stream.

The Strategy also requires waste authorities to 'fully explore opportunities for the recycling of street cleansing and trade waste, including trade waste collections' (Proposal 20). There is currently little incentive for commercial waste collection companies to offer competitively priced collections for recyclable waste and therefore it is up to the waste collection authorities to encourage sustainable municipal waste management practices. If a London Borough effectively prices itself out of the market for collecting commercial waste this conflicts with the policies in the Mayor Municipal Waste Strategy.

Defra makes clear its view that an authority may not reduce its municipal waste arisings by ceasing its commercial wastes collection service.

Examples of best practice which broadly follow these policy issues have been described in this report. However, it should be recognised that, at this early stage in the development of LATS markets, compliance schemes, biological processing and treatment methods a preferred or best practice approach will depend on individual circumstances.

1.4 Research

In order to support this guidance, two areas of research were undertaken:

- ◆ finding and **evaluating existing best practice guidance** on trade waste recycling schemes; and
- ◆ finding and **evaluating collection authority case studies** which demonstrate effective trade waste recycling schemes, from which to identify key lessons for future best practice.

The research on existing guidance shows that support for collection authorities in the UK is focused towards household recycling collection schemes rather than developing trade waste recycling schemes. National guidance from Defra on Municipal Waste Management Strategy (2001)⁵ encourages authorities to set policies to deal with non-household municipal waste, but little guidance is offered to encourage the development of recycling schemes for this sector.

Existing guidance for dealing with commercial wastes is focused around waste prevention, from the waste producers' point of view, rather than towards developing innovative collection schemes. While research has cited the opportunities in commercial and industrial waste collection for recycling, the same research has acknowledged the lack of reliable data or guidance in this area. Details of the documents and websites which were reviewed are provided in Section 3.

For the case study research, collection authorities in the UK and abroad were contacted to identify how current trade waste recycling schemes operate and what benefits and lessons can be learnt. The lessons are then translated into best practice guidance. The details of the case studies are recorded in a pro forma, one for each case study. Excerpts from the case studies are used throughout this

⁵ <http://www.defra.gov.uk/environment/waste/strategy/cm4693/index.htm>



document to illustrate key points. Appendix 1 provides a summary matrix of the case studies identified and Appendix 2 provides for full details of all case studies.

2. TRADE WASTE RECYCLING ACTION PLAN

2.1 Key Considerations

Researching operational trade waste recycling schemes has led to the identification of a number of key considerations to be addressed when implementing a trade waste recycling scheme. Depending on the circumstances within an individual authority, the relevance and influence of the considerations may change. It is likely that trade waste recycling schemes that target the biodegradable fractions of the commercial waste stream will have a positive effect in terms of diversion and achievement of LATS targets.

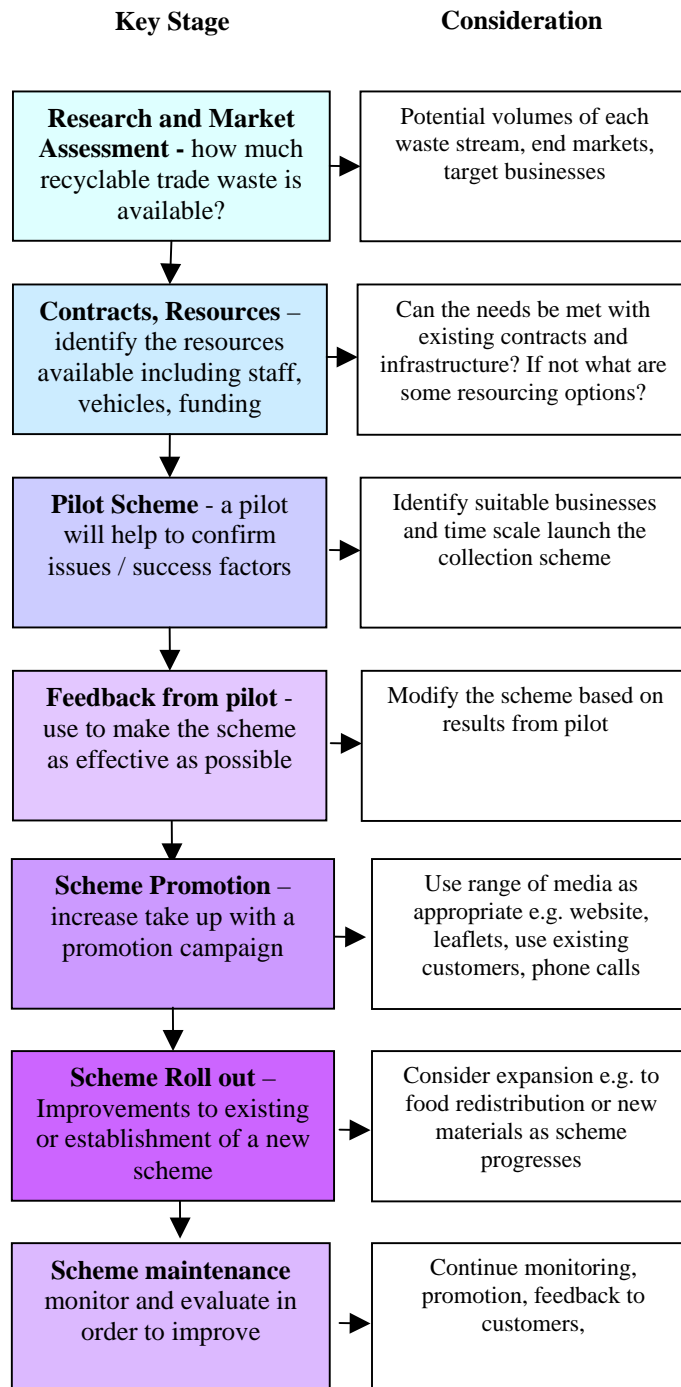
The main issues or key considerations are:

- ◆ Research
- ◆ Contracts
- ◆ Target Businesses
- ◆ Markets
- ◆ Materials
- ◆ Resources
- ◆ Costs and Funding
- ◆ Pilot Schemes
- ◆ Promotion,
- ◆ Monitoring, Measuring and Feedback
- ◆ Scheme Roll Out and Maintenance
- ◆ Potential Issues and Solutions

These are described in detail under the relevant headings.

2.2 Summary and Action Plan

The following diagram summarises the key considerations described in detail in this report. The diagram summarises and identifies the *major* stages which may be required in the expansion of an existing trade waste recycling scheme or the development of a new scheme. It should be noted that the issues and considerations should be referred to and that the diagram is not a flow-chart, implying “complete this step before contemplating the next”. The diagram does not cover every detail for consideration.



2.3 Research

Initial, targeted research is essential when considering setting up a trade waste recycling scheme. Differences in emphasis may apply depending on whether the scheme is to be built on an existing trade waste collection or if starting from scratch. The identification of existing information on businesses and waste arisings, markets and reprocessors and any gaps in knowledge will assist in identifying a scheme which best meets the needs of the borough and potential or existing customers. Addressing the key considerations outlined in Section 2.1 above and described in detail below will aid the decision-making process, along with an examination of examples of similar schemes. Details of Contacts and Useful Information are included in Section 3.

Case Study: A scheme for organics collection from businesses in the towns of Groton and Stonington, Connecticut

This pilot scheme targeted wastes generated from grocery stores, restaurants and conference centres. The scheme revealed that as the nearest compost facility was over an hour away by road, haulage costs were deemed to be too high. The scheme has been discontinued.

Key Consideration: Research into available markets and reprocessing facilities probably would have identified this issue prior to the trial. The trial could have been more effectively targeted.

2.4 Contracts

The key considerations regarding contractual issues for trade waste recycling include the following:

- ◆ Use of existing contractors – can the existing contract accommodate an additional service? Is it easier to add a contract modification than develop a new contract? The impact of this on the contract will vary dependent on whether it could be incorporated into existing collections e.g. from bring banks. The contract will need to allow for changes to the scheme if necessary, for example, can it accommodate the collection of additional material? The ability to extend an existing contract should be checked with the authority's legal advisors. The contract could include clauses for the contractor to provide or rent bins, flexibility in the frequency of collections and the number of clients and flexibility in the range of materials for collection and recycling.
- ◆ Partnerships – a partnership with a local organisation may be appropriate. Community based groups may offer local collections for recyclables in certain geographic areas; however these are specific to each authority and will therefore need investigating at a local level.
- ◆ Materials reprocessors – a contract may be appropriate with a reprocessor, or initially the ad-hoc delivery of materials may be preferred. A contract is preferred in the long term but an ad-hoc arrangement may be appropriate in the development phase, whilst "supply and demand" issues are quantified. The chosen approach should take account of variations in the market price for materials and the flexibility in the trade waste recycling scheme the authority requires. If the authority transfer stations are only handling household recyclates then a direct contract with a materials reprocessor may overcome the

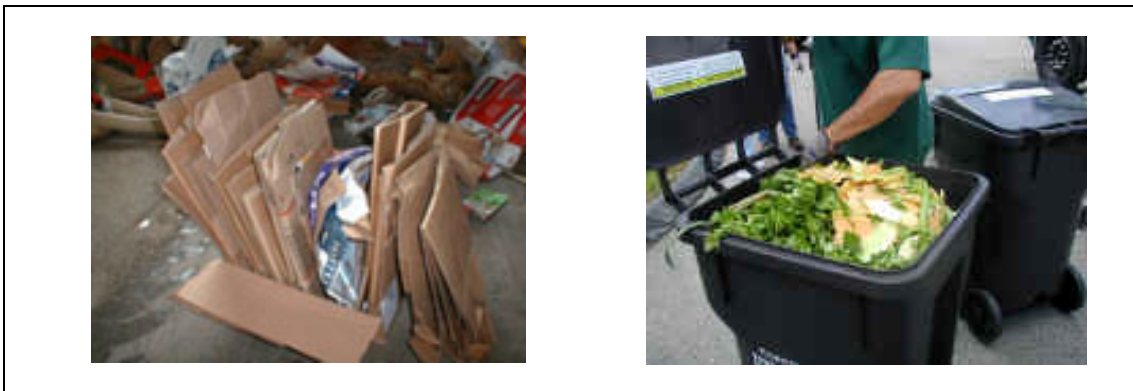
issue of separately trying to account for and measure household and commercial wastes for recycling.

- ◆ Data collection – for reporting purposes, it is important that a contractor collecting trade waste on behalf of the collection authority (as part of the municipal solid waste collection) records the tonnages separately from waste which is collected as part of a private agreement between the contractor and a business (commercial waste). This may be stipulated in the contract with an external supplier. This is particularly important when aiming for compliance with LATS; the tonnage of biodegradable municipal waste diverted through recycling or composting will need to be reported.

2.5 Target Businesses

An authority may wish to develop a trade waste recycling scheme within a limited budget and therefore only collect materials which can be easily arranged via existing infrastructure. Investing in a trade waste recycling collection scheme for mixed catering waste from city centre restaurants, for example, may yield significant material if in-vessel composting capacity or other appropriate treatment plant is available.

In deciding which businesses to target an authority should therefore consider quick wins by targeting sectors which are likely to yield significant returns.



Further issues for consideration in targeting businesses as part of a trade waste recycling scheme include the following:

- ◆ **Materials to be collected** - Targeting different sectors will yield different volumes of each material, for example services to restaurants, hotels, pubs and clubs will usually yield significant volumes of glass, whereas office collections will yield possibly a range of paper waste but also various other materials in smaller volumes. A trade waste recycling scheme will generally service a range of customers unless infrastructure prohibits certain material types.
- ◆ **Organisations to target** - Targeting existing council offices is one way of building up early momentum, similarly targeting business clusters such as business parks and multi-tenanted office blocks. Research (some of which is included as Case Studies here) has indicated that some authorities rolling out a trade waste recycling scheme have been unable to keep pace with demand. Therefore they have focused on collecting from densely populated business districts where collection will be frequent and continue to produce economically viable yields.

- ◆ **Suitability of customers** – consideration should be given to whether the customer is likely to be suitable for a trade waste recycling scheme. The businesses participating in the scheme may need to be reviewed as a scheme progresses, particularly if the level of segregation required is not being achieved or if contamination levels are high. Authorities can determine how and whether they offer a service to a client on a site by site basis by assessing:
 - the nature of the business;
 - its waste streams;
 - the location;
 - frequency of collection required;
 - container type required; and
 - access for collection vehicles.

The scheme could be tailored to customers needs by collecting both their general and recyclable waste.

Case Study: Selection of customers, Toronto, Canada

The City of Toronto has specific criteria for targeting and providing trade waste recycling services to business clients. The authority offers and promotes services to retail establishments, restaurants, banks, offices and greengrocers. Businesses can participate in the scheme if the building within which their business is located falls within the following eligibility criteria:

- ◆ The ground floor area does not exceed 500 square metres (1,250 square metres for those businesses that were receiving City collection prior to 2002)
- ◆ The building has fewer than four above-ground storeys; or is located in mixed residential / commercial properties or;
- ◆ For plazas and malls, where the residential area of the plaza or mall is at least one-third of the total area, and fewer than four above-ground storeys.
- ◆ The scheme is not open to industrial establishments.

Reasons for the above criteria include the ability of collection vehicles to service such facilities.

Key Consideration: Careful selection of customers can contribute markedly to the success of a scheme.

2.6 Markets

The collection of recyclable or compostable waste will only be of benefit if there is a market for it. Considerable effort goes into developing markets for recyclables, for example London Remade and WRAP both look at new uses for recyclables and expanding existing markets. The appropriateness of a market depends on a number of factors:

- ◆ **Capacity** – the market needs to have the capacity to handle the materials collected. The majority of reprocessors servicing London have the capacity to take additional amounts of material. Sometimes the market value of the

material is low but materials can be bulked or stored until the value improves. Information on products, markets, opportunities and market development can be obtained from London Remade and WRAP. Further details of useful contacts are included in Section 3.

- ◆ Location – the transport costs will be increasingly significant if the market is not local and an existing outlet. This in turn will affect the net price achieved for the materials and also the cost, which may have to be levied for the service. Calculating the maximum distance of a market given the predicted tonnages of material will help to identify the location of the most suitable markets.



http://www.moray.gov.uk/moray_standard/page_41050.html

Case Study: Locations of markets for Birmingham City Council, UK

Birmingham City Council offers free of charge office paper collection. Transport costs are kept to a minimum through the use of a paper reprocessing facility near Birmingham, where domestic paper collections are also taken.

Key Consideration: Locations of reprocessors and markets are essential issues

- ◆ Value – the value of recyclables varies according to a range of market factors, such as availability of materials. This is often reflected in the price of packaging recovery notes (PRNs). When considering how much value may be obtained for the materials collected, it should be noted that this price is unlikely to stay constant. For example Wrexham BC currently takes glass to Glass Recycling UK, but recognises that the destination of recyclables changes according to where the best price can be obtained (see Section 2.9 on Costs and Funding). For collection authorities the consideration of the value of materials and where the materials can go will be more significant than those with private contractors. The private contractors will be able to advise on where the materials will go and the price obtained for them is likely to be negotiated in their contract.

2.7 Materials

The summary matrix (Appendix 1) shows the main trends in trade waste recycling identified through the research, including the materials collected. Twenty one local authorities in the UK and overseas reported that they operated trade waste recycling schemes. The majority of the authorities collected paper, card and glass. Only five authorities collected plastics, 6 collected metals and 4 organisations

collected food wastes. The materials chosen depend on a range of considerations, including available markets, which are addressed in Section 2.6 and the issues described below:

- ◆ Collection infrastructure – collection of materials through a reuse and recycling centre (discussed in more detail in Section 2.15) may mean that collection of green waste or other recyclables are appropriate. Consideration should be given to the appropriate segregation of materials which may need to be reflected in the types of containers issued to customers. If a market requires materials to be collected separately e.g. glass, the practicality of this requirement should be evaluated and the request needs to be communicated to the customers in the scheme. A summary of the options and a table of collection method against material is provided in Appendix 1.

Case Study: Issues with a glass collection service provided by Wrexham Borough Council

A glass collection service was started for existing customers, with the focus on pubs, bars and restaurants:

- ◆ the service is provided free of charge to customers to act as an incentive;
- ◆ uptake of the scheme was slower than expected
- ◆ customers found that they had difficulties separating the glass from the remaining trade waste - particularly pubs and clubs had this difficulty
- ◆ many trade waste customers are reverting back to their original trade waste contract because of the contamination problems.

Key Consideration: Adequate systems need to be in place to manage contamination – awareness and education, conveniently located infrastructure.

- ◆ Drivers and Incentives – making existing systems more efficient, diverting biodegradable trade waste from landfill will contribute to the LATS targets. The targets are challenging for many authorities, therefore focussing trade waste recycling on biodegradable wastes will assist with compliance with the LATS targets. The biodegradable wastes which are commonly found in trade waste bins include paper, cardboard, green waste and food waste.

Partnerships – working with partner organisations which collect specific materials can provide an opportunity to increase the types of materials collected. Authorities may be able to find a partner organisation to collect materials which they otherwise may not have the capacity to collect or process. For example, the Moray Council in Scotland have a service agreement with Moray Waste Watchers for glass collection.

2.8 Resources

The resource requirements of a trade waste recycling scheme need to be considered, particularly when the scheme uptake increases. The key considerations are highlighted below:

- ◆ Staff requirements – Existing staff may be available as part of current collection arrangements or may be keen to become involved in expanding the scheme to include recycling. Alternatively, additional staff may be required for a number of roles, depending on the scheme. The new or additional roles include increased collection crews, promotional or awareness raising staff, resources for a helpline or provision or advice through visits to businesses, waste handling staff

at collection facilities such as materials recycling facilities, development of a pilot scheme and data collection before and during the scheme's development.

- ◆ Containers – additional containers will be required for most materials. Cardboard or film may be bundled, however other materials such as glass or food waste will need a new container. The number of new containers will depend on whether the materials are co-mingled or segregated. Consideration should be given the timing of the container ordering and delivery to coincide with a smooth start to the project and to the possible cost to the trade waste recycling scheme users.

Case Study: Container requirements, Toronto, Canada

The Yellow Bag scheme in Toronto provides a number of types of waste containers dependent on the businesses needs and the materials collected.

- Yellow bags for residual waste – a charge of \$3.10 (~ £1.30) is made for each, to cover the cost of waste collection and disposal.
- Bulk bins – used by customers with large volumes of residual waste.
- Lidded organic waste bins for food waste – a charge of \$55 (~ £24) is made for each container to the customer. Collection costs are applied in addition.
- Recyclables boxes for small quantities of recyclables – a charge of \$6 (~ £2.60) is made for each. Collection costs are applied in addition.
- Recyclables bulk bins for customers with larger volumes of recyclables – a charge of \$85 (~ £40) is made for each. Collection costs are applied in addition.

www.city.toronto.on.ca/yellowbag/index.htm



Key Consideration: Think about the range, volume and nature of materials to be collected

- ◆ Vehicles – consideration should be given to the vehicle requirements for collection of the recyclables. A number of authorities use the same vehicles for trade waste recycling collections and for servicing bring sites. This requires a separate record of the household waste tonnage and commercial waste tonnage for reporting purposes. Additional vehicles may be required when the scheme develops and should be taken into consideration when costing the project. The requirements for additional resources would best be assessed at the Pilot Scheme stage (see Section 2.10)
- ◆ Materials handling infrastructure – consideration should be given to the ability of an authority to handle the increased collection of recyclables, if the material is to be taken to a collection authority site. Data collection in advance of the project start and predictions of the tonnages to be managed will assist in this. If a transfer station or MRF is used, it needs to be available to effectively handle the materials. In order to establish the potential for trade waste recycling, whether existing infrastructure and facilities are adequate, the nature, volume

and types of materials some locational and business specific research will be necessary.

Case Study: Materials handling infrastructure, Cardiff County Council

In January 2004 Cardiff County Council started a trade waste recycling scheme for a range of dry recyclables. The scheme's success has led to the existing infrastructure being overwhelmed.

Recyclables from household and trade collections are taken to the same MRF, which was found to be too small to cope with the increased quantity in materials. In order to manage the tonnages from the trade waste recycling scheme and a planned expansion of kerbside recycling, the MRF is being expanded and new machinery introduced to improve efficiency.

Key Consideration: Estimate the quantity of material likely to be collected by the trade waste recycling scheme and compare with capacities of existing infrastructure

- ◆ Direct Service Organisations (DSO) - For authorities operating a DSO, finding the resources to manage a trade waste recycling scheme will be a key consideration. As well as sourcing the funding for the additional resources, as would be required for an out sourced contractor, time may be required for recruiting additional staff and sourcing the containers or vehicles. Consideration should be given on the potential for leasing containers and vehicles instead of requiring a significant capital outlay.

2.9 Costs and Funding

Currently most funding streams open to collection authorities in England are concerned with the development of domestic kerbside recycling rather than commercial collection, therefore the development of any trade waste recycling scheme will normally require self financing. The majority of collection authorities who develop such an initiative do so via funding through their internal mainstream budgets or through cost recovery from existing collections. The key considerations are below:

- ◆ Funding infrastructure - Many authorities will already have much of the necessary infrastructure in place through their existing services, therefore in considering the development of additional services it is essential to consider any impacts the new services will have on existing capacity and services. The possible purchase of additional infrastructure such as bins or sacks, and the use of vehicles and staff to operate the scheme will need to be taken into account.
- ◆ Cost to the customer – Under the Controlled Waste Regulations, authorities can charge for trade waste collections. The extent to which authorities choose to charge their customers for recyclables collection will depend on individual circumstances. Trade waste recycling schemes operated in the public sector are in direct competition with private sector organisations offering similar services. Collection services therefore need to remain financially competitive. The cost to businesses can also determine level of participation or take up of a scheme. Authorities which introduce a trade waste recycling service may consider targeting existing customers first; offering a subsidised or reduced rate for the collection of paper, glass, cans and other recyclables to encourage participation and diversion of materials. To provide incentives for recycling trade wastes the charge for the collection of trade wastes could offset the cost of recycling.

Case Study: Example of charging arrangements, Peterborough City Council

Peterborough City Council offers an 1100 litre recyclables bin collection contract for £300 per annum (weekly collection). The same service for normal refuse would cost a business £509 per annum.

Key Consideration: Decide on levels of pricing or incentives and targets to be satisfied.

- ◆ Costs of containers - Costs to businesses will also vary according to the type of receptacle used. While some councils choose to rent bins and containers, others charge for a roll of sacks. Other examples of charge systems adopted by authorities include a one-off charge for containers to new trade waste customers. Some authorities have adopted free recyclable collection schemes as an incentive to encourage greater participation and commitment. However market revenues from the sale of recyclables will not normally cover the costs of a collection scheme. As a result some costs will generally have to be passed on to businesses. Therefore whilst some Council's continue to offer a free collection for certain materials, many have reverted to charging businesses either per lift or for rental of receptacles, or both.



- ◆ Match price to demand - Offering a free collection service can also create such a demand for its service that a Council may quickly become overwhelmed with enquiries.

Case Study: Greater than expected demand, Caerphilly CBC

Caerphilly County Borough Council (CBC) introduced such a scheme in December 2002 for glass, cans and cardboard. Consequently they quickly reached capacity and are now only able to accommodate existing customers with plans to expand the scheme subject to acquiring additional facilities.

Key Consideration: Match price or incentives to level of demand that can be handled.



<http://www.onyxgroup.co.uk/pages/recycomm.asp>

- ◆ Do not rely on cost incentives alone - Cost savings will not always ensure effective participation in a trade waste recycling scheme. Whilst businesses can be attracted by financial incentives, many may be unable to make the necessary cultural changes required as part of the scheme. If a business is unable or unwilling to dedicate time to segregating materials they are unlikely to be a valuable customer. Other factors identified as part of this study therefore need to be considered alongside possible cost incentives to encourage business participation in a scheme. These include cultural, political, logistics and infrastructure factors in terms of commitment from participants, compliance with policy and borough requirements, collection and treatment arrangements and facilities.
- ◆ Additional funding sources – Revenue can also be generated via other sources. Authorities are increasingly opening borough reuse and recycling sites to the private sector and charging a “competitive” rate for use of the facility. Further details are provided in Section 2.15.1 but boroughs are in a position to choose or dictate how existing facilities are used, subject to contractual requirements and constraints and can use these to their advantage.

Case Study: Trade waste recycling charging, London Borough of Southwark

Southwark provides a trade waste recycling collection service for materials including glass, cans, paper via a range of receptacles. The Council provides collection on a flexible basis for its customers, collecting up to 5 times a week where its customers require such a service. Charges are at a reduced rate from normal refuse collection. The council charges for receptacles on a per lift basis, with an additional weekly charge for rental of each container type. A summary of its charging system is detailed below.

Charges for collection are displayed via their website:

Normal waste collection charges:

Container Type	£ Per Collection	Weekly Container Hire
Bags	£1.03	N/A
240 ltr Wheelie-bin	£2.25	£0.52
330 ltr Wheelie-bin	£3.34	£0.63
660 ltr Eurobin	£4.70	£1.55
1100 ltr Eurobin	£6.90	£1.70
Paladin	£7.12	£1.70
8 Cubic Yard Skip	£89.87	£5.75

Recycling Charges

Container Type	Paper	Glass	Can	Weekly Contain Hire
Bags	£0.60	N/A	N/A	N/A
240 ltr Wheelie- bin	£1.29	£1.29	£1.29	£0.50
330 ltr Wheelie- bin	£1.92	£1.92	£1.92	£0.60
660 ltr Euro bin	£2.70	£2.70	£2.70	£1.48
1100 ltr Euro bin	£3.96	£3.96	£3.96	£1.63
8 Cubic Yard Skip	£51.60	£51.60	£51.60	£5.50

The Council feels that reduced rates have significantly contributed towards requests for trade waste recycling services over the past year.

www.southwark.gov.uk/BusinessCentre/Tradewaste/

Key Consideration: Explore various charging measures as both incentives and generators of revenue

2.10 Pilot Scheme

Following the research step described in Section 2.3, a pilot scheme may identify problems with a proposed collection scheme prior to any significant investment in infrastructure. Work for this report included the compilation of proformas for a number of local authorities (See Appendix 2). Asking what authorities would have done differently in developing their trade waste recycling schemes, it became clear that many felt undertaking pilot studies would have been useful. One authority suggested how they had not considered the full impact that trade waste recycling would have on their infrastructure, consequently requiring an expansion and redesign of their MRF as a direct result of additional materials through its trade waste recycling scheme.

In considering a pilot scheme an authority must consider the following key areas:

- ◆ Clear aims for the pilot scheme should be developed, described and agreed with the relevant parties at the outset. Ways to measure the success of the pilot scheme should be established
- ◆ Size of the pilot study – how many businesses will be involved in the study? This may be determined by the project budget. The minimum or optimum

number of contributing businesses will be dependent on business type(s) selected, location and density of contributors, types of material(s) to be collected, level of financial support available, how the “success” of the scheme is to be judged (i.e. “success” could range from satisfying a policy goal to making a financial profit having considered all costs)

- ◆ Duration of the study – The trials needs to be an appropriate duration in order to fully assess any operational concerns or participation issues. Generally trials can run anything between three and twelve months, yet again may be determined by any set budget and resource availability.
- ◆ Target audience – An authority will have an existing client base through its existing trade waste service. They can therefore use this portfolio to target existing customers first rather than new ones. An authority can “cherry pick” reliable customers and those which may have not shown an interest in recycling to compare the two groups. This will give an indication of the level of communication required in rolling out and promoting the scheme to businesses.

Case Study: Example of consultation on a trade waste recycling scheme, Toronto, Canada

The City of Toronto’s Solid Waste Management Services organises domestic and commercial waste management refuse disposal and recycling operations across the city. Prior to implementing a commercial waste recycling operation, the City of Toronto undertook an extensive communications programme in 2001 that included a consultation process with Toronto’s Business Improvement Areas.

The consultation included several direct mailings to over 20,000 businesses and visits by the authority’s staff and via student placements throughout the summer to gauge responses and feedback about the likely demand for the service. Consequently the research provided Toronto with positive feedback as to the likely buy-in by businesses in Toronto leading up to its promotional campaign and eventual roll out.

www.city.toronto.on.ca/garbage/commercial/index.htm

Key Consideration: Market research is vital to assess the potential uptake and usage of a trade waste recycling scheme.

2.11 Scheme Promotion

There are many ways in which a trade waste recycling scheme can be promoted, such as using websites and advertisements. Other methods of promotion include via existing Council licensing and inspection visits to trade premises and promotional or informative literature, local press, leafleting and trade magazines. The implementation of “Clean Neighbourhood” schemes and the conducting of inspections can provide both the carrot and the stick, to encourage and praise where appropriate and to invoke or at least imply the force of law if necessary. The following promotional methods appear to have been effective, based on this research. A combination of measures may be appropriate:

- ◆ **Existing methods** - Use existing awareness – such as messages in trade newsletters from the council, with rate bills and when new businesses register with the council.
- ◆ **Websites** - are a popular method of conveying in detail the services an authority offers, including the materials, the frequency and the cost to its clients. Providing additional information may encourage greater uptake and sense of ownership by the business sector and therefore may assist the uptake of any scheme.

Case Study: Website, The Moray Council

Moray Council in Scotland provides case study examples of how the business sector has contributed towards recycling rates via its website. This details which community groups are involved, where the materials collected are destined and how they are reprocessed.

See: www.moray.gov.uk/moray_standard/page_41050.html

Key Consideration: Up to date information may be provided to interested parties relatively easily and cost-effectively.

- ◆ **Leaflets** – this can be a relatively low cost element of a promotional campaign. Well designed leaflets can provide information on the frequency and importance of a recycling scheme. Instructional information on what can and what can't be recycled can also improve the effectiveness of any scheme. Leaflets however can be thrown away or perceived as junk mail by businesses.
- ◆ **Advertisements** - are a useful means of promoting a trade waste recycling scheme, enabling a high degree of control over the messages that are communicated. Costs need to be measured against the likely benefit of advertising in some other forms of media, with the majority of adverts for such schemes advertised via local press and trade magazines rather than radio or television.

Case Study: Advertisements, Birmingham City Council

Birmingham City Council advertises their recycling scheme via its website and also through local trade magazines. They have also recently started promoted in the service via the Muslim business community and other ethnic business groups.

Key Consideration: Effective promotion of the trade waste recycling service can include a range of targeted advertising.

- ◆ **Telephone promotion** - Dedicated telephone helplines are a popular promotional support technique for domestic recycling collection schemes. Whilst trade waste recycling schemes will not necessarily require the same level of resources, training staff to promote the scheme via business enquiries concerning refuse collection may increase uptake.

Case Study: City of Subiaco, Perth, Western Australia

The City of Subiaco offers a free trade waste recycling service to its customers who are already paying for the collection of a 240 litre refuse container. Subiaco promotes the service via its website, offering instructional information on how to get a recycling service and how to use a recycling service.

See: www.subiaco.wa.gov.au

Recycling services for businesses are promoted first, with normal refuse collections promoted further down the web pages, therefore requiring the surfer to consider at least the trade waste recycling scheme in the first instance.

Clear guidelines are provided to businesses on what do put in each of the red and yellow containers provided by the authority, with a helpdesk number for further information on how to arrange for a collection.

- ◆ **Licensing and Inspection** – There is an opportunity for local authorities to develop joined up working across the borough for example as part of scheduled or ad hoc visits to premises by environmental health officers, trading standards officers, education and other inspectors. Advice can be provided regarding

illegal dumping of trade wastes at the kerbside, enforcement of the Clean Neighbourhoods and Environment Bill and promotion of recycling services.

Co-ordinating these targeted promotional activities with national and regional advertising/awareness campaigns is vital to ensure a consistent message and to take advantage of the resources available. This will maximise links with any wider campaign in order to increase the effectiveness of any promotional activity.

2.12 Scheme Roll Out

Increases or improvements in existing schemes or the implementation of new services or schemes will require a number of actions including:

- ◆ Co-ordination with other authority activities – the introduction should be timed to co-ordinate with the scheme promotion and advertising and could be kick started with other related events, for example a business or industry week, or focus on waste and recycling issues for maximum impact. Opportunities for continued promotion and reminders about the service at regular intervals (at least annually) should be identified.
- ◆ Resourcing for implementation – additional resources should be allocated for the first few weeks after the scheme's promotion or implementation. An increase in telephone calls and enquiries from the customers may be anticipated, until a routine for collection of recyclables is established.

2.13 Monitoring, Measurement and Feedback

- ◆ Monitoring of collection materials and participation – Monitoring is required in order to evaluate the effectiveness of the scheme. This may include an assessment of the types and quantities of likely materials, the potential for and the actual level of contamination, the frequency at which businesses participated and the actual volumes of materials collected from each business.
- ◆ Customer feedback – The key to a successful scheme is to develop two-way communication with customers, allowing businesses to comment on the types of materials to collect, what they are being asked to do, identify any issues of concern and therefore address any negative perceptions of the scheme. The feedback from customers should be evaluated in order to improve the scheme's efficiency and the ability of the customers to participate effectively. Feedback may be obtained through a questionnaire, customer visits or through phone calls. This will help the scheme's organisers to break down any barriers to using the scheme which customers may have.
- ◆ Evaluation – this is a critical part of the process. This is particularly important if the scheme is developed in order to assist with LATS compliance. The tonnages collected for recycling and composting should be reported. In addition, the cost of the scheme should be reported to evaluate the cost per tonne of the recyclables collected. Issues of contamination can be monitored and fed back into the promotional material and support offered to customers on the scheme. This may also lead to a re-evaluation of the types of businesses from which recyclables are collected.

2.14 Potential Issues and Solutions

There are a number of issues to consider in making the trade waste recycling scheme successful and sustainable. A number of key issues, based on this research and experience, are highlighted below:

Potential Issue	Potential Solution
Low up take of scheme	Promotion of service, cost adjustment to make service more competitive
Contamination of recyclables or organics	Increased literature, site visits, assistance for new customers, focus on suitable customers only. Provide feedback (good and bad) to customers.
Infrastructure cannot handle the increase in recyclables	Reassess the capacity of available infrastructure and tonnages to be recycled. Consider diverting materials to another site or capping the number of customers until the infrastructure can be improved. A pilot scheme may identify the need for more at an early stage.
Funding for the project cannot be sustained	Research external funding sources e.g. government grants. Consider applying or increasing a charge to customers who are using the recycling service. Consider more locally based reprocessors for reduced transport costs.

2.15 Other Considerations

2.15.1 Trade Waste Recycling at Borough Reuse and Recycling Centres

Currently trade waste is not accepted at most borough reuse and recycling sites. However a number of authorities operate a system of permits, issued to traders to allow them to deposit waste at these sites. Although there is no statutory duty to allow trade waste at reuse and recycling sites, there is potential for this approach to assist with increasing diversion of BMW from landfill and generate income, although resultant increases in trade waste throughput will add to total municipal solid waste arisings.

The following table gives examples of how some authorities control the admission of trade waste to their reuse and recycling sites:

Table 1 Authorities allowing trade waste at Reuse and Recycling sites

Authority	Waste Type	Charge/Permit
London Borough of Bexley	Green waste can be taken to the reuse and recycling site	£13 inc. VAT per 100 kg £49 inc. VAT per 1000 kg (figures valid until 31/03/2005)
Oxfordshire County Council, Redbridge site.	Small quantities of trade waste only via weighbridge	General trade waste is £60 per tonne minimum charge of £20 for a third of a tonne or less. If the load is 100% recyclable e.g. clean green waste, the charge is halved.
Cheshire CC, Crewe	Green waste only	Traders buy a permit. Cost is dependant on the size of the vehicle. £400 for a small van, £600 for a transit up to £800 for a double axle vehicle. Permits are allocated to a specific vehicle not the purchaser

Trade waste entering reuse and recycling sites can pose a problem for authorities. It is reported⁶ that in order to prevent traders, particularly manual traders, illegally using reuse and recycling sites, a mechanism is required to enable traders to recycle their wastes. One solution may be to develop specific centres or the collection infrastructure for trade waste recycling, or to issue permits to more traders, allowing them to use reuse and recycling sites. The key is to allow traders to recycle their waste at a lower cost than that of disposal.

Trade waste has potential to contribute significantly to reuse and recycling site municipal solid waste recycling levels; the report confirms that approximately 16% of trade waste brought to a reuse and recycling site is 'recyclables'. This includes paper, card, metal, plastic, glass and wood. However, it should be noted that recycling achieved through trade waste will not contribute to the household waste recycling targets which authorities are required to meet.

2.15.2 Food Redistribution

Information from Crisis FareShare suggests a quarter of waste being sent to landfill from the food industry is still fit to be eaten. Food redistribution is not widespread in the UK. Crisis FareShare is a UK network which contributed to diverting over 2,000 tonnes of organic waste from landfill in 2004. Currently, this charity is not supported significantly by collection authorities. FareShare would like to engage the collection authorities on a more strategic level, as the charity believes it could have an impact on the collection authorities' use of landfill. In addition, there are the obvious social benefits of such a scheme.

⁶ Western Partnership for Sustainable Development (2002) Trade waste Input to civic amenity sites.

Case Study: Food Redistribution, Crisis FareShare

Crisis FareShare was set up in 1994 to address poor nutrition amongst homeless people and waste in the food industry. FareShare redistributes quality surplus food from the food industry to organisations working with homeless and vulnerable people in community day centres and hostels and works in partnership with over 150 companies and 250 local charities. The benefits of this arrangement are:

- The scheme improves the health and well being of over 12,000 vulnerable people each year.
- In 2004, FareShare distributed 2,000 tonnes of food which would normally go to landfill as biodegradable waste.
- This surplus food contributes to over 20,000 meals a week in 2004.

www.fareshare.org.uk

Key Consideration: Social and political targets may be met in addition to encouraging diversion of BMW from landfill

A survey undertaken by the Norlands Foundation⁷ on behalf of FareShare suggests that the most common disposal route for food waste is landfill; 60% of food waste from the businesses questioned is disposed of to landfill with other 'disposal' routes including charitable donations, animal feed or composting. This is a specific waste stream which is given little consideration at the moment, but should be considered in the development of a trade waste recycling scheme, particularly in city areas where the social benefits would most be felt.

2.15.3 Reuse and Recycling: Bulky Wastes and the Waste Electrical and Electronic Equipment Directive

Waste prevention work in small businesses is important as they contribute significantly to the municipal waste stream through trade waste collections and deposits at reuse and recycling sites (in some cases illegally). The local authority can do a large amount to raise public awareness and promote reuse outlets through waste prevention campaign work.

Goods which have been discarded by businesses may be reusable, after limited refurbishment or repair, a service which may be provided by community based projects. The UK has a variety of community-led reuse and refurbishment projects. Several schemes support re-use of electrical goods and furniture involving some level of repair or refurbishment, collecting business waste as well as household waste. These include "Create" (Liverpool and London), "The Sofa Project" (Bristol) and the Renew projects (Gateshead and elsewhere). While such schemes reduce waste arisings, their primary aim is social in terms of offering jobs to the disadvantaged and providing low cost goods for poorer households.

⁷ FareShare. (July 2004) UK Food and Drink Industry Waste and Surplus Review.

**Caste Study: The Oxfordshire Big Store**

Oxfordshire County Council, in conjunction with district councils and community sector organisations, plan to develop a 'Big Store' that will bring together various community reuse initiatives under one roof. It will provide low cost accommodation for workshops, retail space and potentially a café and educational facilities. It will be linked to 'satellite' projects around the county that will control stock through a joint database. This larger scale operation should bring extra flexibility and economies of scale and should allow a further 15,000 tonnes of waste to be dealt with through reuse and refurbishment.

Key Consideration: Local organisations have a key role to play in the implementation and success of some reuse and recycling schemes

The UK is required to implement the Waste Electrical and Electronic Equipment (WEEE) Directive by August 2005. This will result in new UK producer responsibility regulations and potentially give rise to a variety of recovery schemes. The Directive sets a target for collecting and recycling an average of 4 kg of electronic waste per person every year; the UK is already achieving this. Retailers are required to offer to take back 'old' goods on a one for one basis when a customer buys an equivalent new product. Producers are required to arrange for collection of household WEEE. These requirements may present opportunities for trade waste recycling and reuse.

Case Study: Furniture Reuse Network (FRN) WEEE Developments.

The FRN is coordinating the development of 45+ regional 'WEEE Sort it Centres' (warehouses). These will provide a service to Local Authorities, retailers and other WEEE stakeholders, to aid the collection and separation of WEEE from the waste stream. The facilities will have the capacity to ensure that good quality reusable electrical and electronic equipment is repaired and fully tested for distribution to people in need, throughout the UK. The facilities will also have the capacity to take on other services to meet with the WEEE requirements and targets, such as collection, temporary storage, low level treatment, dismantling and transportation for further processing. The organisations involved in the Movers Group within the FRN, will provide facilities to a national standard (fit for reuse ©) and will carry out all operations to follow the FRN management systems. The operational tracking system to be implemented at each of the facilities will be that of the FRN ARC system. www.frn.org.uk

Key Consideration: Local organisations have a key role to play in the implementation and success of some reuse and recycling schemes



3. CONTACTS & USEFUL INFORMATION

The following organisations have proved useful sources of information and a summary of who they are, what they do and their contact details is provided.

Envirowise

Envirowise offers UK businesses free, independent, confidential advice and support on practical ways to increase profits, minimise waste and reduce environmental impact. This government-funded programme can help make business more competitive and profitable, and ensure compliance with environmental legislation.

Helpline: 0800 585794

Website: www.envirowise.co.uk/

London Remade

London Remade is an innovative recycling programme aimed at increasing markets for recycled products and driving the development of an entrepreneurial recycling supply chain. A unique partnership between the business community, public and not-for-profit sectors, London Remade uses recycling as a vehicle to drive economic and social regeneration and is principally funded by the London Development Agency to deliver green procurement and business support programmes

Tel: 020 7061 6360

Fax: 020 7061 6391

Website: www.londonremade.com

Enhance

Enhance is a complimentary service providing business support and advice to London-based organisations working along the recycling, reuse and remanufacturing supply chain. It aims to facilitate growth amongst small businesses and social enterprises working with recyclable materials across the Capital, offering expert advice on business development, marketing, access to funding and premises.

Tel: 020 7061 6369

Website: www.enhancelondon.co.uk

London Community Recycling Network

London Community Recycling Network (CRN) is a not for profit, second tier, organisation that supports, promotes and represents the community sector in London. Collectively London CRN members are the largest provider of recycling services in London.

Tel: 020 7324 4690

Website: www.lcrn.org.uk/

**Waste and Resources Action Programme (WRAP)**

WRAP was established in 2001 in response to the UK Government's Waste Strategy 2000 to promote sustainable waste management.

WRAP gained additional responsibilities in 2003 as a result of the Government's response to the review of waste policy undertaken last year by the Prime Minister's Strategy Unit (Waste Not, Want Not, a Strategy for Tackling the Waste Problem in England). WRAP is set up as a not-for-profit company limited by guarantee by DEFRA, the DTI, and the devolved administrations of Scotland, Wales and Northern Ireland.

WRAP's mission is to accelerate resource efficiency by creating efficient markets for recycled materials and products, while removing barriers to waste minimisation, re-use and recycling.

Tel: 0808 100 20 40

Website www.wrap.org.uk

Waste Watch

Waste Watch is the leading environmental charity dedicated to the reduction, reuse and recycling of household waste. Waste Watch's values are derived from a desire to protect the environment by ensuring the sustainable use of scarce resources. These values provide the basis of the work with community organisations, local authorities, educational establishments, businesses and individual members of the public. Waste Watch provides educational projects, information, consultancy, publications and training events and advocacy for all sectors.

Website: www.wasteonline.org.uk/

Commercial wastes information:

[www.wasteonline.org.uk/resources/Wasteguide/mn_wmo_recycling_commercial.htm](http://www.wasteonline.org.uk/resources/Wasteguide/mn_wmo_recycling_commercial.html)
[l](#)

Tel: 0870 243 0136

Greater London Authority

Advice is also available from the Greater London Authority Policy Officer -Waste Liaison & Contracts, with regard to information on contracts.

Tel: 020 7983 4273



APPENDICES



1. CASE STUDY SUMMARY MATRIX

Authority	Used Guidance	Business types	Materials						Receptacle		Charges		Expanding/ high demand
			paper	card	plastic	glass	metal	food	sack	bin	free	per bin/bag	
Bath and N E Somerset		restaurants, bars	✓	✓					✓		▪	✓	▪
Wrexham BC			▪			✓			▪	✓	✓		▪
Thameside	✗	offices, pubs, restaurants	✓			✓			▪	✓	✓		▪
Swansea		all	✓	✓		✓			✓	✓	▪	✓	▪
Southwark		all	✓	✓					▪	✓	▪	✓	▪
South Ayrshire		all	▪	✓		✓			▪	✓	▪	✓	✓
Rhondda Cynon Taf			✓			✓			✓	✓	✓		✓
Powys CC	✗	all	✓	✓	✓	✓	✓		✓	✓	▪	✓	✓
Peterborough City Council		offices	✓	✓	✓	✓	✓		▪	✓	▪	✓	✓
Nottingham City Council		offices, pubs, restaurants	✓	✓		✓			▪		▪		✓
Moray Council	✗	all	✓	✓		✓	✓		✓	✓	▪	✓	✓
Monmouthshire	✗	offices, pubs, restaurants	✓	✓		✓			▪		▪		▪
City of Westminster		offices, pubs, restaurants	✓	✓		✓	✓		✓	✓	▪		▪
Camarthenshire CC		offices, shops	✓	✓		✓			▪	✓	✓		✓
Cardiff CC	✗		▪	✓	✓	✓			✓	✓	▪	✓	▪
Caerphilly			▪	✓		✓			▪	✓	✓		✓
Birmingham CC	✗	offices, pubs, clubs, retail	✓	✓	▪	✓	▪		▪	✓	▪	✓	▪
Crisis FareShare, UK Charity		Retail, manufacturing,	▪	▪	▪	▪	▪	✓	▪	▪	✓	▪	✓
City of Lomita/FoodFinders, USA		Restaurants, hotels, retail, manufacturing	▪	▪	▪	▪	▪	✓	▪	▪	✓	▪	✓
Connecticut, USA		Retail, restaurants and others	▪	✓	▪	▪	▪	✓	▪	✓	✓	▪	▪
Hurstville, Australia		General businesses	✓	✓	✓	✓	✓	▪	▪	✓	▪	✓	▪
Toronto, Canada		Retail, restaurants, offices	✓	✓	✓	✓	✓	✓	✓	✓	▪	✓	▪



2. CASE STUDY PRO FORMAS