

**Local Authority Internal Waste Management Opportunities  
and Good Practice**

**Report to**

**Scottish Government & CoSLA**

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# Local Authority Internal Waste Management Opportunities and Best Practice

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The Caledonian Environment Centre is part of the School of the Built and Natural Environment, Glasgow Caledonian University and is supporting environmental research and policy development in Scotland.

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## Executive Summary

In 2005 Local Authorities were funded to conduct internal waste audits and produce Waste Prevention Action Plans (WPAPs) through the Strategic Waste Fund.

Data obtained from 21 Authorities<sup>1</sup> suggested that the internal activities of all 32 Local Authorities in Scotland generate approximately 118,000 tonnes per annum (tpa) of municipal solid waste (MSW), exclusive of green waste and roads' waste. Schools were found to be generating approximately 60% of arisings; followed by community, culture and leisure (CCL) facilities, which generate approximately 13% of arisings; offices, with 11%; and care homes and social work (CHSW), with 7%. The distribution of arisings suggested that the greatest impact will result from initiatives focusing on paper and card (52% of arisings) followed by organic waste (10% of arisings).

This Report provides an update and overview of current Local Authority progress on reducing internal waste production, and maximising recycling. The information was gathered from telephone interviews, a short questionnaire hosted on Zoomerang and a seminar in March 2009.

The continuation of WPAPs has been varied. However, most authorities are taking forward actions to some degree. All of the authorities who provided information are active in progressing internal waste management initiatives. The focus of these initiatives is waste recycling but there are also examples of waste minimisation projects being developed. Other activities mentioned related to education and procurement projects begin progressed. Examples of good practice can be identified across the authorities.

'Waste Services' and 'Sustainability' are the services/teams commonly given the remit to address internal waste management in Councils. However, the ability to implement, in particular waste minimisation, projects is often outside the traditional remit of these services/teams in terms of allocation of responsibility and resources. This highlights that fact that internal waste management is a cross service issue. In particular, Procurement and Finance are key services that need to be engaged with this agenda.

Contact with the local authorities identified a commitment and enthusiasm to making further progress in the future. Authorities are starting to dedicate staff to this area and some are investing in further waste audits.

Eight common factors that are important in ensuring the success of internal waste management initiatives have been identified. These can help local authorities prioritise and plan future projects.

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<sup>1</sup> Remade (2008). Strategic Overview of the Waste Prevention Project within Scottish Local Authorities. Remade. The report presents aggregated data from the 21 Local Authorities involved in a Remade Scotland management and support programme to facilitate delivery of the scheme.

Element	Detail	Local Authority Comment
<b>1. High level commitment</b>	<ul style="list-style-type: none"> <li>• Leadership &amp; prioritisation - Support from senior management</li> <li>• Organisational buy-in - Integrated in corporate aims and objectives</li> <li>• Allocation of responsibility &amp; resources</li> </ul>	<i>“enthusiasm needs to come from further up”</i>
<b>2. Ownership</b>	<ul style="list-style-type: none"> <li>• Staff given specific responsibility and ownership for delivery</li> <li>• Focus</li> <li>• Regular input &amp; continuity</li> <li>• Facilitation</li> </ul>	<i>“to be successful [we] need someone to regularly input and sustain enthusiasm.”</i>
<b>3. Data</b>	<ul style="list-style-type: none"> <li>• Benchmark, monitor &amp; plan</li> <li>• Target resources, interventions &amp; initiatives</li> <li>• Measure success</li> </ul>	<i>“[we] need a formal data management system”</i>
<b>4. Adequate Resources</b>	<ul style="list-style-type: none"> <li>• Invest and sustain change – spend to save</li> <li>• Resources available for dedicated staff.</li> <li>• Resources for necessary additional capital outlay.</li> </ul>	<i>“budget support needed”</i>
<b>5. Behaviour Change and Education</b>	<ul style="list-style-type: none"> <li>• Help users change and understand change</li> <li>• Overcome challenges to change</li> <li>• Training in induction procedures and targeted training for relevant staff</li> <li>• Appropriate material disseminated to communicate schemes and initiatives in place.</li> <li>• Clear labelling of facilities.</li> </ul>	<i>“occasional attitudinal and behavioural barriers in some 'pockets' of workforce”</i>
<b>6. Procurement</b>	<ul style="list-style-type: none"> <li>• Sustainable procurement policy in place.</li> <li>• Holistic approach</li> <li>• Consider waste during use and at end-of-life</li> <li>• Provision for data collection</li> </ul>	<i>“procurement departments should have sustainability policies with the involvement of Heads of Services”</i>
<b>7. Operational</b>	<ul style="list-style-type: none"> <li>• Appropriate storage</li> <li>• No conflict with health and safety</li> <li>• Implementation</li> <li>• User friendly initiatives</li> </ul>	<i>“can limit the potential to collect materials for recycling”</i>
<b>8. Recharge Arrangements</b>	<ul style="list-style-type: none"> <li>• Understanding that waste minimisation/recycling costs</li> <li>• Incentive for minimisation &amp; recycling</li> </ul>	<i>“can be an issue”</i>

Recommendations for future support work by Remade have been made.

Success Factor	Support	Commentary	Actions	Timescale	Partners
<b>Ownership</b>	<b>Networking for Dissemination and Sharing</b>	<p>94% of the 18 authorities that completed the online survey indicated that they would welcome the opportunity to network with other authorities on in-house waste management. Seminars, workshops, webinars and discussion groups were all popular as a means of doing this.</p> <p>The event hosted by Remade in March has initiated the beginnings of a network. Those attending felt more coordination of information would be welcomed. Where possible existing forums should be used.</p>	<ul style="list-style-type: none"> <li>Facilitate 2 Network Meetings for Local Authorities.</li> <li>Integrate events with existing networks.</li> <li>Seek to expand network further beyond Waste Services staff (NB some success at first event with several Sustainability officers attending)</li> <li>Consider hosting at least 1 event as webinar or video conference.</li> </ul>	2009/10	The most suitable existing networks with which to hold collaborative events need to be identified e.g. SSN
<b>Adequate resources</b>	<b>Case Studies</b>	<p>The idea of developing case studies of local authority best practice with regards to internal waste management including details of implementation, tonnage diversion and financial savings was welcomed by local authorities at the event hosted by Remade in march. These can be used to support</p>	<ul style="list-style-type: none"> <li>Further develop case study material</li> <li>Three suggested areas for case study focus are construction, green waste and WEEE.</li> <li>Disseminate case studies via</li> </ul>	2009/10 + potential to continue in future years	Local authority network

Success Factor	Support	Commentary	Actions	Timescale	Partners
		business justification and planning for new initiatives.	Remade web portal and network (see above).		
<b>High Level Commitment / Behaviour Change and Education</b>	<b>Lobby Senior Officers and Chief Executives</b>	Promote the advantages & benefits (especially financial) of waste minimisation to Senior Management including Chief Executives as their support is fundamental to the success of such initiatives	<ul style="list-style-type: none"> <li>Distribute summary case study materials to Senior Officials and elected members.</li> <li>Seek to make a formal presentation to SOLACE.</li> </ul>	2009/10	Local authority network
<b>Data</b>	<b>Develop method for data collection internally</b>	<p>Authorities have recognised the need for consistent data collection, analysis and recording. This is essential for planning and monitoring. Factors to be considered include:</p> <ul style="list-style-type: none"> <li>Conversion factors</li> <li>Education</li> <li>Links with waste data flow</li> <li>Carbon</li> <li>Contractor data</li> <li>Differing services</li> <li>Verification / Role of waste audits</li> </ul>	<ul style="list-style-type: none"> <li>Work with directly with 2 Councils to develop a methodology for data capture</li> </ul>		<p>Envirowise</p> <p>2 partner local authorities</p> <p>Possibly SEPA</p>

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## 1. Introduction

National and European recycling and diversion targets have stimulated the implementation of a range of initiatives by Local Authorities, but due to the funding arrangements and support available, these have tended to focus primarily on domestic waste.

However, improving waste management practices internally within Local Authorities generates a number of benefits. It is a means to demonstrate commitment to sustainable practices (i.e. leading by example). Local Authorities can derive financial savings from avoided disposal costs, as well as other reduced costs including procurement and freed staff time. Initiatives can also result in carbon savings, increasingly important within the emerging carbon agenda.

In 2005 Local Authorities were funded to conduct internal waste audits and produce Waste Prevention Action Plans (WPAPs) through the Strategic Waste Fund. This Report provides an update and overview of current Local Authority progress on reducing internal waste production and maximising recycling.

The information presented in this Report was gathered from telephone interviews and a short questionnaire hosted on Zoomerang. The questionnaire and the Councils who supplied information are listed in Appendix 1. An event was hosted by Remade Scotland on **Local Authority Internal Waste Management** on 26<sup>th</sup> March 2009. The views and information gathered at this event are also reflected in the report. A summary of this event is provided in Appendix 2.

Information gathered has been primarily obtained via waste services contacts. It is recognised that this is likely to mean that some activities within the Council that have an impact on waste production will not have been identified. The work has highlighted that delivery of improvement is not a waste services issue alone. In particular, other relevant departments are procurement, facilities management and sustainability.

The Report is structured to provide an overview of current activity followed by a discussion of the factors identified that can contribute to further improvement. The Report concludes with some recommendations to assist Local Authority performance in the future.

## 2. Background

In November 2004 the Minister for the Environment and Rural Development, established a fund to support Local Authority internal waste audits and WPAPs. In response to this announcement, a number of Councils proposed to deliver a waste audit across each of the Council's services with a view to producing a WPAP, with achievable waste prevention targets, over a 12 month period.

Data obtained from 21 Authorities<sup>2</sup> suggested that the internal activities of all 32 Local Authorities in Scotland generated approximately 118,000 tonnes per annum (tpa) of municipal solid waste (MSW), exclusive of green waste and roads' waste. This represented between 2% and 4% of total MSW arisings in Scotland and equated to 488 kg/full time equivalent (FTE)/annum or 24 kg/capita/annum.

Schools were found to be generating approximately 60% of arisings (c. 71,300 tpa); followed by community, culture and leisure (CCL) facilities, which generate approximately 13% of arisings (c. 15,600 tpa); offices, with 11% (c. 12,700 tpa); care homes and social work (CHSW), with 7% (c. 8,400 tpa); and 9% (c. 10,500 tpa) by a range of 'other' facilities that did not fit in any of the previous classification (e.g. workshops).

The distribution of arisings suggested that the greatest impact on waste minimisation and reduction would result from initiatives focusing on paper and card (52% of arisings) followed by organic waste (10% of arisings).

### 3. Waste Prevention Action Plans (WPAPs)

The continuation of WPAPs since the original work finished has been varied:

- 20 authorities<sup>3</sup> indicated that they have some form of action plan or strategy that includes internal waste prevention and minimisation that has been formally adopted by the Council. At least 9 authorities were using the original WPAP produced which had not been updated.
- Another 5 authorities indicated that they were in the process of developing an action plan or strategy.
- Most of the Councils have used the WPAP as a springboard to develop initiatives.
- Several authorities indicated that they have developed or are developing the WPAP into a wider strategy document; for instance Sustainability Action Plan or Strategy.
- Some have indicated that they have no intention of developing an action plan or similar. However, this should not necessarily reflect lack of commitment or action in this area for the authorities concerned.

Some examples of the variation in both approaches and progress in implementation are highlighted below.

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<sup>2</sup> Remade (2008). Strategic Overview of the Waste Prevention Project within Scottish Local Authorities. Remade. The report presents aggregated data from the 21 Local Authorities involved in a Remade Scotland management and support programme to facilitate delivery of the scheme.

<sup>3</sup> Out of 27 authorities giving a response.

Dundee produced a Waste Audit Report and the recommendations were agreed and implemented by the Corporate Management Team. Similarly Orkney's Waste Audit report was signed by a Convener and the Council Leader. East Ayrshire has a WPAP and has established a Waste Prevention Nominated Officer Working Group whereby nominated officers report on any successes/difficulties they have experienced through implementing the Plan. West Dunbartonshire has an adopted WPAP. Aberdeen City's Council Committee approved a Transformation Plan for Internal Waste in 2008.

Fife is committed to sending zero waste to landfill by 2020. In implementing this strategy, Fife have a series of action plans and projects, including internal waste recycling and composting. South Ayrshire does not have a dedicated waste prevention plan but has incorporated policies and targets for in-house waste prevention within the Area Waste Plan. Edinburgh produced a Resource Efficiency Policy as a result of the waste audit. Edinburgh plan to take consideration of this policy in the development of a new Sustainable Development Strategy for the Council. Perth and Kinross are currently developing a strategy for management of internal waste within the Council.

## 4. Internal Waste Management Initiatives

This section provides an overview of the internal waste management initiatives highlighted by the Local Authorities contacted.

### 4.1. Waste Audits

A few authorities are continuing with waste audits beyond the 2005 WPAP project. **Tables 1** and **2** give further details of waste audits carried out by West Lothian and Shetland and the actions that have come about as a result. Remade has worked with Envirowise during 2008/09 to help them identify Councils interested in working with them on resource efficiency programme. This involves Envirowise conducting environmental audits at selected premises. To date Aberdeenshire and East Renfrewshire have become involved in the programme.

**Table 1 West Lothian Waste Audits**

West Lothian – BEP Environmental Placement Student	
<b>Project</b>	As part of the Business Environment Partnership’s Environmental Placement Programme a waste management review was undertaken at West Lothian Council. Waste audits were undertaken at eight Council buildings. The aim was to promote in-house recycling, examine how internal recycling schemes are being used and identify ways in which the services could be improved.
<b>Results</b>	The audits identified various issues related to the way Council staff were using the current recycling services and ways in which recycling of specific waste streams could be improved. Some waste minimisation actions were also identified, for instance reducing the amount of paper and confidential wastes.
<b>Lessons Learned &amp; Recommendations:</b>	<p><b>Operational Issues:</b> organisation of waste disposal and collection was found to be a contentious issue. For example, in some premises access impacted on the reliability of uplifts. To embed recycling within each building, it was suggested that collections could be reviewed with and potential disputes quickly resolved.</p> <p><b>Changing behaviour:</b> education and awareness was highlighted as the most important element in improving recycling performance. Use of ‘waste champions’ was recommended to communicate the correct message to staff. The importance of keeping all Council literature on waste policy up to date was also noted.</p> <p><b>Dedicated resource:</b> in relation to the above it was recommended that a dedicated employee would be beneficial to organise a structured waste management policy, implement a systematic education programme and work to identify solutions to operational barriers.</p> <p><b>Lack of clear instructions and policy:</b> in some areas lack of clear direction was limiting the amount of waste diverted from landfill. For example Council policy about furniture reuse and light bulb recycling was unclear. Improved labelling of recycling bins has potential to reduce contamination and increase the amount of recyclable waste diverted from the general waste stream should help.</p>

**Table 2 Shetland Waste Audits**

Shetland – Waste Audits	
<b>Project</b>	<p>Shetland used the money from the Strategic Waste Fund to employ two Waste Prevention Officers. Officers conducted baseline environmental audits for every Council premises involving several stages:</p> <ul style="list-style-type: none"> <li>• Paper survey.</li> <li>• Collation of data from procurement records.</li> <li>• Building by building site survey.</li> <li>• Building waste composition analysis</li> <li>• Verification.</li> </ul> <p>Site audits included waste, and also energy and water use for smaller sites.</p>
<b>Results</b>	<p>The audits enabled building and service specific recommendations to be developed. Each building was provided with an individual report and the findings were explained in one to one meetings with relevant staff.</p> <p>Good practice has been praised and shared. Case studies are being used to disseminate good practice to other sites. Audits have identified those sites least likely to take action and subsequent visits have been prioritised accordingly.</p> <p>Waste Prevention Officers have been kept in post funded by the savings identified through the audit process.</p> <p>The Waste Audits have been integrated as part of the Council’s Environmental Management System and Environmental Policy, which has helped secure high level support within the Council.</p>
<b>Lesson learned</b>	<ul style="list-style-type: none"> <li>• Physical audits are more accurate: data from physical audits did not correspond with desk-top audits/surveys.</li> <li>• Physical auditing is a time consuming process but achieves good results e.g. accurate data and identifies good practice.</li> <li>• Personal contact is invaluable in identifying user behaviour related to waste generation. For instance, it was identified that continuity of kitchen staff results in lower food waste due to greater re-use of food. Food waste per capita has also been found to be lower in small schools where the staff sit with pupils during meals.</li> <li>• Obtaining political backing at the start of the process can be used as a lever.</li> </ul>
<b>Next stages</b>	<ul style="list-style-type: none"> <li>• Audits will be repeated every 18 months to monitor progress.</li> <li>• Disparity in performance was found between sites and this is being investigated further.</li> </ul>

## 4.2. Waste Minimisation

Some specific initiatives to reduce waste generation were highlighted, in particular relating to paper consumption:

- In one authority central food preparation for schools has reduced food preparation waste.
- South Ayrshire has an in-house Member/Officer Waste Management Working Group that considers all issues to do with waste prevention within the Council's own workplace.
- Falkirk has Service Sustainability Teams that meet quarterly to action SMART resource efficiency objectives, which include some related to physical waste.

### *Print Related*

A number of Councils mentioned activities to reduce waste associated with print services. The authors are aware of additional projects being initiated within Councils that were not highlighted. This again reflects the focus on waste management services on providing direct waste collection services rather than activities that impact on waste generation.

The most common activity has been to encourage staff to use double sided printing. Midlothian has a central aspiration to promote double sided printing. North Lanarkshire Council and Dundee have already implemented double sided printing.

Other authorities that have implemented more extensive printer rationalisation programmes include Argyll and Bute and Aberdeenshire. Fife Council is in the early stages of implementing a print management service project called Print08. This project will see all printers replaced with a smaller number of energy efficient machines. These printers will print double sided to default and require the user to input a code at the printer to release a print job, thus avoiding accidental prints. Significant reductions in WEEE and printer consumables are expected in addition to a reduction in paper use and waste paper production. Aberdeen City produced a Sustainable Printing Policy in 2006 designed to reduce paper waste, energy use and toner consumption and in September 2008 the Council Committee approved targets for reduced consumption of paper and office waste (5% in 2008/2009 and 2009/2010 and 3% in 2008/ 2009 and 12% in 2009/2010 respectively). Actions are monitored to assess whether these strategies are having an impact on these figures.

As one Council commented, the above illustrates that information communication technology impacts on the way in which people generate paper waste. Relevant services need to be brought on board to bring about change. In Orkney for instance, an issue was that Departments were purchasing cheap printers without consideration of the ability to print duplex, or the associated costs of consumables. This identifies one benefit of a strategic sustainable procurement policy.

Orkney has rationalised Council publications including keeping subscription lists updated. One authority is proposing to move to electronic record and document storage systems.

### 4.3. Recycling

The focus of activities identified by Councils was the implementation of recycling schemes at Council premises. All the Local Authorities have implemented recycling services within Council properties to varying degrees.

The coverage of the recycling schemes varies but commonly includes Council offices and schools. Many of the schemes were implemented as a direct result of the work conducted in the production of the WPAPs. For instance, Dundee stated that the WPAP led to improved recycling of IT equipment. The materials most commonly covered by schemes are glass, cans, paper, cardboard and plastics. Other materials identified were printer cartridges, Tetrapak, textiles and batteries.

Generally schemes are integrated with existing domestic and/or commercial waste services run by the Council. As such, many Local Authorities indicated that it was not possible to obtain monitoring data on how much waste has been diverted from landfill.

Some Councils reported that they make recycling services 'free' (i.e. exempt from internal charges) in order to incentivise uptake. One Local Authority stated that recycling is offered for 'free' to users because it was cheaper to provide than residual waste collection. Conversely another Local Authority stated that they offered recycling at the same price as residual waste collection even though recycling was more expensive. One Council highlighted that recycling services were only being offered free to schools.

A number of Councils reported that their ability to implement recycling was limited by the availability of facilities and space.

Schemes implemented to recycle non-office wastes were identified by some Councils. These included cooking oil, green waste, landscape waste and construction waste. For instance, West Dunbartonshire has redesigned recycling centres to allow segregation of parks and construction waste. Midlothian have investigated hand towel recycling or composting with green waste and they are also looking at recycling of plastic cups.

A number of Councils used the WPAP or subsequent surveys to determine the most appropriate recycling service for different locations. Midlothian determined service provision based on the waste audit and service type and they prioritised roll out to focus on the "big hitters" first in terms of waste generation. Recognising that one size does not fit all, two recycling advisors at East Dunbartonshire surveyed all the office sites to work out the most effective recycling approach.

Some local authorities identified other areas where they would value further support. These included litter picking, grounds maintenance, fly-tipping,

contaminated green waste, soil and cemetery waste. Not all of these relate directly to Council generated wastes.

Falkirk's Building Maintenance Division has recycling skips in depot yards and on works sites. They expect to start collaboration with WRAP on their commitment to halve construction waste to landfill initiative, in conjunction with introduction of Site Waste Management Plans.

#### 4.4. Reuse

Only a few authorities highlighted that they have implemented reuse schemes. All those mentioned involved the reuse of furniture. Dundee has an office furniture reuse strategy and West Dunbartonshire an electronic office furniture reuse programme.

Falkirk launched a school and office furniture reuse pilot in November 2008. The aims of the pilot are to provide a single point resource for the sale of high quality, warranted reusable office furniture; repair of existing furniture; removal and reuse of surplus furniture; and the recycling of end-of-life items. The pilot is run by a social enterprise for public and private sector and householders. Key aims are to increase reuse and repair of office furniture, reduce furniture waste to landfill, create new skilled 'green' jobs, and reduce the cost of buying brand new furniture to Falkirk Council.

#### 4.5. Education

Education and awareness as a key element to underpin recycling programmes and other activities was highlighted by many authorities. The following paragraphs identify the main approaches adopted.

- **Website.** Websites are used to raise awareness and disseminate information. Shetland has an environmental issues website for internal staff including 'Frequently Asked Questions' on environmental issues.
- **In-house publications.** Falkirk have produced a series of Waste & Resources Policy Guidance Notes giving instructions on how to reduce, reuse and recycle a range of products and materials (e.g. pallets, fluorescent tubes, confidential waste, office waste, wood dust, building maintenance depot waste). These are posted on the Council intranet. Orkney has produced a DVD covering internal and external waste management and hints and tips.
- **Awareness-raising campaigns.** Recycling services are commonly promoted using emails and posters. At Falkirk recycling posters indicate the types of materials accepted for recycling and are displayed in all Council operated buildings as well as on the Council intranet. At West Lothian their Waste Strategy Officer worked with the in-house education and awareness team to roll out in-house recycling services. South Ayrshire also uses posters.

- **Training for employees.** This varies from awareness-raising presentations and talks to more formal training. Dundee undertakes training and awareness-raising with staff. In Falkirk key cleaning, janitorial and office staff receive training on sustainable development and recycling. West Dunbartonshire holds waste prevention guidance workshops for all staff and train of Recycling Centre site operatives. Several Councils also highlighted that they include waste management and green issues in staff induction procedures. Orkney have produced a DVD and induction pack for all employees. This contains the Council Waste Policy, a copy of the waste hierarchy, a list of top 10 tips and list of waste champions. These actions came out of their WPAP production.
- **Use of green/recycling/waste champions.** At Midlothian 'waste champions' are used to support the introduction of new recycling services. Orkney established waste champions in all Council properties following production of the WPAP. North Ayrshire has 'recycling champions' in Departments to deal with relevant issues and take projects/actions forward. South Ayrshire has a network of 'waste champions' in each office, and through their Sustainability Forum co-ordinate the dissemination of a waste reduction, reuse and recycling message. Another Council highlighted that they are developing office green champions to promote waste, energy, transport and procurement as part of their carbon management programme.

#### 4.6. Procurement

Procurement was not discussed by many Local Authorities. This probably reflects the emphasis on recycling from waste management services rather than a lack of activity by the Councils in this area. However, a few procurement initiatives were identified, particularly the development of Sustainable or green procurement policies:

- Aberdeen City produced an updated joint procurement policy and strategy in 2008. This addresses sustainable procurement to reduce waste. Sustainability and environmental issues have been built into specifications.
- Shetland have harmonised procurement using their Procurement Strategy. This moves the Council towards central procurement and reduces variability
- South Ayrshire has an office printer cartridge recycling scheme, whereby the printer supplier is required to 'take back' cartridges and used printers for recycling.
- Midlothian has introduced re-usable crockery to replace single use items at selected offices.

## 5. Best Practice

Across the local authorities some common elements which contribute to the success of internal waste management have been identified. These elements have been illuminated due to both the success of the initiatives in some authorities and the barriers identified by others. These elements are summarised in Table 3 and discussed further below.

**Table 3 Elements of Best Practice**

Element	Detail	Local Authority Comment
<b>High level commitment</b>	<ul style="list-style-type: none"> <li>• Leadership &amp; prioritisation - Support from senior management</li> <li>• Organisational buy-in - Integrated in corporate aims and objectives</li> <li>• Allocation of responsibility &amp; resources</li> </ul>	<i>“enthusiasm needs to come from further up”</i>
<b>Ownership</b>	<ul style="list-style-type: none"> <li>• Staff given specific responsibility and ownership for delivery</li> <li>• Focus/ Facilitation</li> <li>• Regular input &amp; continuity</li> </ul>	<i>“to be successful [we] need someone to regularly input and sustain enthusiasm.”</i>
<b>Data</b>	<ul style="list-style-type: none"> <li>• Benchmark, monitor &amp; plan</li> <li>• Target resources, interventions &amp; initiatives</li> <li>• Measure success</li> </ul>	<i>“[we] need a formal data management system”</i>
<b>Adequate Resources</b>	<ul style="list-style-type: none"> <li>• Invest and sustain change – spend to save</li> <li>• Resources available for dedicated staff.</li> <li>• Resources for necessary additional capital outlay.</li> </ul>	<i>“budget support needed”</i>
<b>Behaviour Change and Education</b>	<ul style="list-style-type: none"> <li>• Help users change and understand change</li> <li>• Overcome challenges to change</li> <li>• Training in induction procedures and targeted training for relevant staff</li> <li>• Appropriate material disseminated to communicate schemes and initiatives in place.</li> <li>• Clear labelling of facilities.</li> </ul>	<i>“occasional attitudinal and behavioural barriers in some 'pockets' of workforce”</i>
<b>Procurement</b>	<ul style="list-style-type: none"> <li>• Sustainable procurement policy in place.</li> <li>• Holistic approach</li> <li>• Consider waste during use and at end-of-life</li> <li>• Provision for data collection</li> </ul>	<i>“procurement departments should have sustainability policies with the involvement of Heads of Services”</i>

<b>Operational</b>	<ul style="list-style-type: none"> <li>• Appropriate storage</li> <li>• No conflict with health and safety</li> <li>• Implementation</li> <li>• User friendly initiatives</li> <li>• User safety</li> </ul>	<i>“can limit the potential to collect materials for recycling”</i>
<b>Recharge Arrangements</b>	<ul style="list-style-type: none"> <li>• Understanding that waste management has associated costs</li> <li>• Incentive for minimisation &amp; recycling</li> </ul>	<i>“can be an issue”</i>

### 5.1. High Level Commitment

A few authorities highlighted that high level commitment to improvement of internal waste management is key to ensure it is seen as a priority across all services. If a commitment to improving internal waste management is incorporated into corporate aims and objectives it will facilitate joint working across services.

### 5.2. Ownership

One Council identified that lack of operational responsibility for internal waste was a significant barrier. Several Local Authorities alluded to the reality that progress with internal waste management is reliant on senior officers in waste services allocating resources, but that internal waste arisings were not perceived as being a priority.

In relation to this issue a couple of authorities highlighted that it was important for them [waste service department] to lead by example. This also relates to the need for behaviour change and education throughout the Council (see Section 5.5).

### 5.3. Data - Measurement and Monitoring

Many authorities stated that they do not know how much waste they generate or that is recycled beyond the data collected by the original waste audits. Some highlighted lack of data as an issue. The recycling collections generally sit within the wider waste services provided for the area by the Council and as such the material collected is not quantified separately. One Council tried to specify in the recycling contract that the amounts collected should be measured, but had the clause removed by the procurement department.

A few local authorities are monitoring waste generation by continuation of waste audits. Falkirk carry out bi-annual waste audits for schools and offices, with mini-audits conducted in alternate years. These audits provide on-going monitoring data which is reported through Service Sustainability Teams to Corporate Management Team. Data includes recycling rates in a sample of buildings and schools. Waste reduction targets are under consideration for inclusion in the targets regime. Shetland Council is also continuing to carry out waste audits (see Section 4).

Envirowise have been working with local authorities to conduct waste audits.

Some Councils stated that it would be useful to understand the financial savings that can be achieved as a result of recycling and minimisation activities. Falkirk undertakes cost comparison before and after installation of recycling facilities at Building Maintenance Division depots. This data is reported to relevant management to act as spur to improving current recycling performance. The Print08 project being implemented by Fife will provide a wide range of management statistics which will help quantify financial savings.

Orkney commented that it is difficult to quantify the cost effectiveness of initiatives because they do not have benchmarking data.

Other approaches to monitoring being adopted by Local Authorities include:

- Use of working group to report on progress within individual services;
- Use of waste analysis;
- Comparing numbers of recycling bins filled against residual waste bin usage for each Council properties involved
- Estimation of quantities from waste collection crew feedback;
- Carbon emissions savings calculated based on waste recycling and composting tonnages; and
- Use of indicators including recycle at sites and numbers of offices recycling.

At Falkirk the furniture reuse pilot will provide waste data including tonnes diverted from landfill, cost savings made from displacing brand new furniture and tonnes of furniture reused.

Perth and Kinross and North Ayrshire discussed developing a system for measuring and monitoring performance in the future.

#### **5.4. Adequate Resources**

Some local authorities are dedicating staff or, more commonly, a proportion of staff time to focus on internal waste management. Midlothian has a Waste Aware Team who have responsibility for a range of initiatives associated with recycling performance and internal recycling has been added to their responsibilities; Aberdeenshire has a Waste Management Officer responsible for internal waste; Perth and Kinross have recently employed a new Waste Minimisation Officer who has been given responsibility for developing the internal Waste Management Strategy; In West Dunbartonshire the Waste Aware Team carries out both internal and external plans.

This staff resource is not always located within waste services. Falkirk has one Waste Minimisation Adviser and one Waste Education Officer within the Waste Strategy Unit who are responsible for reducing the amount of waste in Council buildings and

schools sent to landfill. However, they also mentioned that one Sustainable Development Officer, in Planning & Environment Unit, has a wider remit to reduce all resource use (physical waste, water and energy) across the Council. Aberdeen City has an Environmental Awareness Officer responsible for co-ordinating work on Council targets to reduce consumption of paper, fuel, waste and water. At Fife staff within the Environmental Strategy Team act as project leaders to develop and implement waste reduction and recycling initiatives with other Services.

Other authorities have groups to co-ordinate work on waste minimisation. In most cases the remit of these groups is to address wider environmental issues.

Other Local Authorities reported that they do not have the human resources to dedicate to waste minimisation or recycling activities internally. For instance, Argyll and Bute highlighted lack of resources in terms of both staff time and capital for infrastructure as a barrier to further progress. They identified National recycling targets as their priority. The type of activity that Councils identified as being hindered by lack of resources included:

- Monitoring of existing schemes;
- Provision of training and awareness-raising among staff;
- Support of Green and Waste Champions;
- Supervision of staff e.g. to ensure that horticultural waste is not mixed with other waste;
- Extension of recycling provision to include new materials and/or buildings; and
- Implementation of new initiatives.

**Table 4 Aberdeenshire – Waste Minimisation Officer Case Study**

### Aberdeenshire – Waste Minimisation Officer

In 2008 Aberdeenshire appointed a dedicated Internal Waste Minimisation Officer. The WPAP for Aberdeenshire has identified a case for making internal waste a priority to ensure legislative compliance, realise financial savings and divert waste from landfill.

The programme for work is an evolving and flexible. Some key areas have been:

- Raising awareness.
  - Making staff aware that a member of staff is responsible for waste minimisation.
  - Regular update reports to senior management.
  - Sitting on relevant groups e.g. janitors group, sustainability group.
  - Developing A to Z of education materials to help staff understand issues.
  - Organising competitions to incentivise staff to read material.
  - Recognising that many staff may not have access to internet so awareness materials need to include paper copies
  - Helping staff understand different roles between work and home.
- Composting: composters and green cones introduced in smaller offices. The officer applied for an exemption from SEPA that covers all sites. The officer also promoted the uptake WRAP compost bins by schools.
- Printer rationalisation: Move to Multi Functional Devices (MFDs) resulting in significant paper and energy savings. Repairing and re-using some equipment.
- Requip: Internal e-bay style services on the intranet to share equipment resources e.g. 65 stand alone tills obsolete from libraries were redirected to various school canteens.
- Expanding recycling services: Plastic bottles and trialling reverse vending. BEP student to evaluate what required across the Council and standardise the provision of internal recycling services. Introduced batteries and WEEE collection service (this is the only recycling service offered free) with company that collects WEEE from Council community recycling sites.
- Waste audits for large premises.
- Training. Senior staff. Network green champions.

Budgetary arrangements have been found to complicate matters as although waste is generated on a building by building basis, and buildings are often shared by different services, budgets are allocated to individual services.

## 5.5. Behaviour Change and Education

The majority of local authorities highlighted that they were using education and awareness-raising to improve and promote internal waste management (see Section 4). Authorities felt that it is key to spread the waste awareness message and get the

message through. However, several authorities identified difficulties in communicating new initiatives to the diverse and geographically separate areas and services.

Another issue identified by a few authorities was that gaining the cooperation of members of the workforce is integral to the success of recycling schemes, for example, cleaning staff responsible for segregation of different waste streams for recycling. One authority described problems as “*occasional attitudinal and behavioural barriers in some 'pockets' of workforce*”. These issues can result in lower than average recycling rates and contamination of recycling bins. Councils identified ill defined responsibilities, poor management and lack of awareness as factors. Edinburgh highlighted a lack of ownership by facilities staff. This is heightened as there are no corporate facilities services to deal with all Council property; therefore, issues have to be resolved on a building by building basis.

## 5.6. Operational

A logistical barrier raised by several authorities related to storage of recyclates and health and safety legislation. These related to a lack of storage space for bins and containers and potential fire hazards. Effective communication is required between those responsible for recycling schemes and those with responsibility for health and safety. No authorities offered a solution to this issue. Training and education might help, as well as adequate time available for staff involved to discuss the issues and identify solutions.

## 5.7. Procurement

As highlighted in Section 4 some Local Authorities are introducing sustainable procurement policies. Some Councils highlighted aspects of procurement policy that acted as barriers to enhanced internal waste minimisation.

- Responsibilities: the division of responsibility for waste services can complicate implementation, for instance where a PFI contractor is responsible for schools recycling but the Council has responsibility for food waste collections.
- Staff skills: one authority highlighted that procurement removed the contract clause which would have required the contractor to monitor and report on volumes recycled.
- Procurement objectives: one authority highlighted that procurement staff won't favour any particular type of contract or give any guidance in the decision-making process e.g. advantages of a contract that could deliver environmental benefits but may cost more.
- Procurement ad hoc: some areas of the Council (e.g. schools) will purchase their own consumables rather than using central procurement contract. This can hinder sustainable procurement policies (e.g. purchase of paper that does not work in MFDs) and makes monitoring of resource use difficult

- Other authorities raised procurement as an issue but did not give any further details.

## 5.8. Recharge Systems

A few Councils identified that existing recharge systems were creating a barrier to increased adoption of recycling schemes across their services such as schools, or alternatively were being used to encourage recycling:

- In Edinburgh there is a particular issue in relation to schools where they have an individual budget. Recycling services have to be paid for out of their budget whereas waste disposal is paid out of the central budget. Therefore recycling has an associated financial disincentive.
- In Shetland they were charging by uplift rather than by number of containers. They are moving to charging per container so encourage waste reduction.
- Orkney highlighted that they charge a fixed rate for waste services so there is no financial benefit for recycling.
- One authority stated that the use of central facilities management and recharge systems detracts from the responsibility for the 'polluter' to pay. In other words where the waste producer is not the budget holder there is no incentive to reduce waste.
- Other authorities highlighted that they do not charge for recycling or charge recycling at a lower rate to general waste collection to incentivise recycling (see Section 4).

## 6. Conclusions and Recommendations

### 6.1. Conclusions

The continuation of WPAPs since the funding from the Strategic Waste Fund finished has been varied, although most authorities are taking forward an action plan to some degree.

All of the authorities who provided information are active in developing internal waste management initiatives. The focus of these initiatives is waste recycling but there are examples of waste minimisation projects on the ground. Other activities related to education and procurement.

'Waste Services' and 'Sustainability' are the teams commonly given the remit to address internal waste management. However, the ability to implement, in particular waste minimisation projects is often outside remit of these services in terms of allocation of responsibility and resources. This highlights that internal waste management is a cross-service issue; in particular, Procurement and Finance are key services that need to be engaged with this agenda.

Contact with the local authorities identified a commitment and enthusiasm to making further progress in the future. Authorities are starting to allocate dedicated staff to this area and some are investing in further waste audits.

Eight common factors that are important in ensuring the success of internal waste management initiatives have been identified. These can help local authorities prioritise and plan future projects. These factors have been used as a basis for developing recommendations for future support required by local authorities.

## **6.2. Recommendations**

The output from the workshops and the research conducted for the report informed the development of the activities for 2009/10 by Remade. Recommendations for the areas in which Remade could provide support are given in Table 5. Other areas of support identified are:

- Carbon management: incorporating waste minimisation within the Carbon Trust model.
- Stakeholder analysis: to identify and understand issues and values of other stakeholders within the authority.
- Senior management training.

**Table 5 Recommendations for Remade Support 2009/10**

Success Factor	Support	Commentary	Actions	Timescale	Partners
<b>Ownership</b>	<b>Networking for Dissemination and Sharing</b>	<p>94% of the 18 authorities that completed the online survey indicated that they would welcome the opportunity to network with other authorities on in-house waste management. Seminars, workshops, webinars and discussion groups were all popular as a means of facilitating this.</p> <p>The event hosted by Remade in March has initiated the beginnings of a network. Those attending felt more coordination of information would be welcomed. However, some were not sure if Remade would be the appropriate coordinator, and use should be made of existing forums.</p>	<ul style="list-style-type: none"> <li>Facilitate 2 Network Meetings for Local Authorities.</li> <li>Integrate events with existing networks.</li> <li>Seek to expand network further beyond Waste Services staff (NB some success at first event with several Sustainability officers attending)</li> <li>Consider hosting at least 1 event as webinar or video conference.</li> </ul>	2009/10	The most suitable existing networks with which to hold collaborative events need to be identified e.g. SSN
<b>Adequate resources</b>	<b>Case Studies</b>	<p>The idea of developing case studies of local authority best practice with regards to internal waste management including details of implementation, tonnage diversion and financial savings was welcomed by local authorities at the event hosted by Remade in march. These can be used to support</p>	<ul style="list-style-type: none"> <li>Further develop case study material</li> <li>Three suggested areas for case study focus are construction, green waste and WEEE.</li> <li>Disseminate case studies via</li> </ul>	2009/10 + potential to continue in future years	Local authority network

Success Factor	Support	Commentary	Actions	Timescale	Partners
		business justification and planning for new initiatives.	Remade web portal and network (see above).		
<b>High Level Commitment / Behaviour Change and Education</b>	<b>Lobby Senior Officers and Chief Executives</b>	<b>Promote the advantages &amp; benefits</b> (especially financial) of waste minimisation to Senior Management including Chief Executives as their support is fundamental to the success of such initiatives	<ul style="list-style-type: none"> <li>Distribute summary case study materials to Senior Officials and elected members.</li> <li>Seek to make a formal presentation to SOLACE.</li> </ul>	2009/10	Local authority network
<b>Data</b>	<b>Develop method for data collection internally</b>	<p>Authorities have recognised the need for consistent data collection, analysis and recording. This is essential for planning and monitoring. Factors to be considered include:</p> <ul style="list-style-type: none"> <li>Conversion factors</li> <li>Education</li> <li>Links with waste data flow</li> <li>Carbon</li> <li>Contractor data</li> <li>Differing services</li> <li>Verification / Role of waste audits</li> </ul>	<ul style="list-style-type: none"> <li>Work with directly with 2 Councils to develop a methodology for data capture</li> </ul>		<p>Envirowise</p> <p>2 partner local authorities</p> <p>Possibly SEPA</p>

## Appendix 1: Local Authority Survey

### Zoomerang Survey

The main questions asked were:

- Please give brief details of the main waste management initiatives being taken forward in-house, if any. Examples include printer rationalisation, recycling schemes, Green Champions, training for staff, procurement and purchase of goods.
- Do you monitor or measure the success of any initiatives, either in terms of waste reduction or cost savings?
- Are there particular barriers or issues which are preventing or hindering progress on in-house waste management? Examples may include lack of resources, procurement procedures, recharge systems, lack of storage space for recycle, health and safety considerations etc.
- If you answered 'yes' above, please give brief details of any barriers or issues you have faced implementing or making further progress with in-house waste management initiatives.
- Does the Council have an adopted Waste Prevention Action Plan or similar?
- If you answered 'no' above, is the Council either in the process of preparing a Waste Prevention Action Plan (or similar) or waiting for a plan to be formally adopted?
- Does the Council have dedicated staff with responsibility for in-house waste management, including waste minimisation and recycling initiatives?
- Would your Council welcome the opportunity to network with other authorities on in-house waste management, including waste minimisation and recycling initiatives?

## Appendix 2: Waste Management Opportunities and Best Practice Seminar and Workshop

An event was held on the 26<sup>th</sup> March 2009 with an audience of over 40 delegates drawn primarily from Local Authorities. Over the day there were 7 presentations, as noted below, followed by a discussion workshop.

### Programme

#### 1. Local Authority Waste Prevention Action Plans

*Paulo Cruz and Polly Griffiths, Remade Scotland*

#### 2. The Case for Prioritising Internal Waste Management

*Amanda Ingram, Waste Management Officer (Internal), Aberdeenshire Council*

#### 3. Integrating Waste Management in Environmental Management Systems

*Mary Lisk, Waste Services Environmental Manager, Shetland Council*

#### 4. Print08 – A Case Study for the Benefits of Print Management Systems

*Justin Adams, Project Implementation Manager Print08, Fife Council*

#### 5. Education and Awareness

*Kim Bryce, Waste Aware Scotland*

#### 6. Methodologies for Monitoring Waste Internally

*Robbie Weir, Envirowise*

#### 7. Carbon Management Benefits of Waste Minimisation and Recycling

*Sheila Scott, Research Fellow, Caledonian Environment Centre*

#### 8. Workshop

### Workshop and Feedback

The workshop focused on the 'key success factors' outlined in the main report. Attendees were asked to discuss whether the right factors had been identified, what comment on their experience in relation to these factors, identify best practice and any support they felt was needed in these areas to assist local authorities in taking work forward in the future. A summary of the main points raised is given below. These comments have been taken into consideration in the main Report.

#### *High Level Commitment*

- Commitment is required in the form of setting targets, including commitments in policies and key documents e.g. Sustainability Charters, Environmental policies
- Commitment should be at as high a management level as possible e.g. Corporate Management Team plus, where appropriate, approval by relevant Council committees. It was also suggested the elected members should be involved.

- Some Councils felt they would benefit from having more support from their Chief Executive for implementing internal waste management schemes and resource efficiency initiatives.
- Senior officers need to be updated about the benefits of internal waste management. The provision of information to Chief Executives and Finance Officers of the advantages and benefits (especially cost savings) of such initiatives is invaluable. Promotion to the higher level managers was popular i.e. avoid preaching to the converted. A regular meeting of the managers was suggested. Similarly, it should be clearly linked to the carbon agenda, focusing on what this means for Chief Executives. A trial of the Carbon Trust Model incorporating waste minimization was suggested.
- Without senior level support no dedicated staff can be deployed to drive change.
- Finance services are not always motivated to seek savings. Involvement of the finance services is essential.
- Aberdeenshire highlighted that they have commissioned SEPA to conduct training courses on waste management with senior management.

### *Ownership*

- Generally it was commented that high level commitment was required before the resources could be committed, and roles sufficiently defined, to enable staff to have specific ownership and responsibility for delivery as well as take a coordinated approach. Senior management need to take ownership for actions as well as staff implementing them.
- Benefits recognised of having a coordinated approach, lead officer, and on-the-ground support (e.g. volunteer Green Champions). It was felt that all were necessary.
- Related to this it was also commented that Green Champions and/or sustainability teams could be used to help spread the message to colleagues, provide mentoring, and take responsibility for undertaking certain tasks. Not enough to have a Waste Minimisation Officer alone.
- A need for clear definition of roles was raised. There should be recognition that those being held responsible for such initiatives i.e. facilities management and/or waste services, often don't have the power to do anything e.g. can audit but can't necessarily act upon their findings without the support of the hierarchy.
- Felt that sometimes waste services do not feel it is their responsibility to provide resources to promote internal recycling.

- That identifying the correct person to drive these initiatives (the right person in the service) can be a case of trial and error and can often depend on who's actually driving the process.

### *Data*

- Some authorities are undertaking waste audits. However, obtaining baseline data and its accuracy were raised as a problem.
- A number of Councils reported that schemes had often been implemented without knowledge of the baseline data and without an effective monitoring programme in place to evaluate impacts of change.
- Issues included that:
  - some Councils did not believe that contractor data reflects real data
  - Council staff do not understand the protocol for dealing with Waste Transfer Notes.
  - no verification process
  - no standard conversion factors.
- A need for consistent data collection, analysis and recording was recognised. Suggestions were:
  - Need a formal data management system, online database where all services can enter information on waste to allow monitoring. In a similar way to that used for SEPA Data, this would ideally be something that is compulsory to report on and all Local Authorities would report back in the same way. - Remade could assist with development of database or Councils themselves.
  - Systematic and regular (e.g. annual) waste analyses/audits should provide accurate data to help Waste Minimisation Advisers diagnose problems, monitor performance and feedback success of waste collection systems.
  - Something within waste data flow.
  - Something to take carbon accounting into consideration.
  - Key performance indicators to measure success initiatives

### *Adequate Resources*

- Generally recognized that sufficient budget support needed to support existing and new initiatives. One group commented that a central budget would be helpful.

- Commented that budget needs to be transparent and readily available from all services. –
- Noted that infrastructure budget for capital will be heavier on start up and tail off gradually.
- Commented that unlikely that other service's budgets can be tapped to help finance waste minimisation activities.
- Task and finish can be a problem meaning speed takes priority over efficient/proper waste management.

### *Behaviour Change and Education*

- General recognition that behaviour change and education critical to implementation.
- Commented that communication and promotion needs to be ongoing including giving feedback. Some activities should be compulsory.
- Other stakeholder's issues and values need to be taken into consideration i.e. their needs and perceptions. This identified that the focus needs be on making the process of change relevant to the audience. This may make message vary according to audience. In relation to this it was suggested that some sort of stakeholder analysis could be useful.
- Suggested ways of communicating benefits depending on audience included: environmental, cost saving, job creation, contribution to Eco-schools, and carbon agenda.
- Identified that there are many low cost/free options to publicise progress/actions available e.g. intranet, newsletters, meetings, internal training sessions.
- Identified that rewards can be a useful tool in encouraging behavior change.
- One group commented that there needs to be behavioral change within the waste management services themselves first and foremost, perhaps through training.
- Suggested that waste minimisation champions/Green champions should be organised akin to First Aiders in an organisation.
- Councils' IT staff often when installing new equipment did not provide training or guidance on the most efficient methods of using printers.
- WAS representative highlighted the Waste Aware Business page as a resource.

### *Procurement*

- Identified that procurement is key in bringing about waste minimisation.
- Felt important that procurement departments should have sustainability policies with the involvement of Heads of Services.
- Procurement teams need to work alongside waste and sustainability officers to ensure procurement supports the aims of waste minimisation.
- Suggested that the utilization of recycling facilities should be included in lease contracts.
- Batteries used as one example where sustainable procurement not being implemented.

### *Operational*

- Factors such as storage space can limit the potential to collect materials for recycling.
- Having flexibility in choice of recycling containers was seen as important, to overcome any potential Health and Safety and aesthetic issues.
- Education and involvement of all relevant staff in the implementation of scheme important. For instance:
  - Health and Safety advisors can help overcome any compliance or other issues arising.
  - Consultation with staff that will be responsible for emptying containers.

### *Recharge Arrangements*

- Centralised Budgets were identified as an issue – where neither charges nor savings were allocated to those departments using the services thus removing any ownership or incentive to address any problems.
- One Council advised that they offered a free recycling collection service to their internal commercial clients and partly as a consequence of not needing to charge did not monitor effectively arisings.
- When budgets for waste recycling etc are devolved to buildings, schools etc, then recharging required. The Waste Strategy unit in Falkirk Council does not currently recharge services for recycling facilities, but this will change in due course.

### *Support*

In addition to comments made above two areas of support were

- Case studies: Case studies of local authority best practice with regards to internal waste management including details of implementation, tonnage diversion and financial savings. These can be used to support business justification for new initiatives. Three suggested areas for case study focus were construction, green waste and WEEE.
- Networking: more coordination of information would be welcomed. Some were not sure if Remade would be the appropriate coordinator, and use should be made of existing forums. A Recycling Champions network was suggested. Video conferencing was one suggestion to assist officers for remote locations being involved.