



**Caledonian
Environment
Centre**

Local Authority Research & Support Needs Assessment Report



SUSTAINABLE SOLUTIONS

Report to Scottish Government and COSLA

May 2009

Local Authority Research & Support Needs Assessment Report

Submitted to: Scottish Government and COSLA

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Remade Scotland was the first UK market development programme for recycled materials. The programme has evolved to provide specific Scottish market intelligence, technical research and recycling performance support to Scottish Local Authorities and the Scottish Government. The Scottish Government contracts with the Caledonian Environment Centre (part of Glasgow Caledonian University) for the delivery of the programme.

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.

Glasgow Caledonian University is a registered Scottish charity, number SC02147



Executive Summary

In January 2008 the Cabinet Secretary for Environment and Rural Affairs announced a Scottish Government Policy Commitment to Zero Waste and set out a series of targets for recycling of municipal solid waste (MSW). These targets incorporated and were in addition to those resulting from the implementation of the Landfill Directive.

The Local Authority Research and Support (LARS) programme, was established following discussions with the Scottish Government and COSLA that revealed that there may be areas of information, research or support, which have so far not been identified, or require further research and which could assist Councils, individually or collectively, in achieving the recycling targets.

To guide the programme a steering group, chaired by COSLA (and represented by 7 Local Authority Waste Management Officers) and including Remade Scotland, Waste Aware Scotland (WAS) and the Waste & Resource Action Programme (WRAP), was established.

Through a structured review process, Waste Management Officers in all 32 Scottish Local Authorities were interviewed to determine the type of information, research and support they might find most beneficial and how they would like to access or share any resulting information or best practice.

Authorities were interviewed between 8th September 2008 and 12th January 2009. Summary notes were produced and analysed to identify common areas where information, research and support was identified as valuable.

The thirty two Scottish Councils identified 54 research and support topics, which were categorised into 9 broad themes. These nine broad themes were:

1. Collection Schemes
2. Reprocessing & Treatment Technologies
3. Markets, Outlets & Contracts
4. Education, Awareness & Public Support
5. Staff Training & Development
6. Data
7. Commercial Waste
8. Community Sector
9. Recycling Centres

An additional 7 topics, which did not naturally fit into any of these 9 categories, were grouped together as “other topics”. The interviews also identified a series of non-research issues that Local Authorities wished to raise.

Topics were categorised according to theme popularity and weighted scoring system that reflected their contribution to wider strategic objectives, such as waste management targets, carbon savings, operational efficiencies, economic development and innovation. This resulted in a priority list, which will be used to guide the development of activities that fulfil the information, research and support needs.

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2. Introduction

2.1. Background

In January 2008 the Cabinet Secretary for Environment and Rural Affairs announced a Scottish Government Policy Commitment to Zero Waste and set out a series of targets for recycling of municipal solid waste (MSW).

A commitment was also made to limit the MSW treated at energy from waste (EfW) facilities to 25% of national and regional MSW arisings and a maximum of 5% of MSW to landfill by 2025. In addition to Scotland's recycling targets there is a requirement under the EU Landfill Directive (99/31/EC) to divert biodegradable municipal waste (BMW) from landfill with target set for years of 2010, 2013 and 2020. Parallel to these commitments are the reuse and recycling targets, together with collection infrastructure requirements for household waste, set out in the Waste Framework Directive (2008/98/EC) and the likely continuation of the Landfill Tax escalator.

The Local Authority Research and Support (LARS) programme was established following discussions with the Scottish Government and COSLA, where it was agreed that there may be areas of information, research or support, which have so far not been identified, or require further research and which could help Councils, individually or collectively, in achieving the above targets.

The LARS project as part of the Remade Scotland programme identified the type of information, research and support Council Waste Management Officers might find most beneficial and how they could access and share any resulting information or best practice. A steering group was established chaired by COSLA (represented by seven Local Authority¹ Waste Management Officers) and included Remade Scotland, Waste & Resource Action Programme (WRAP) and Waste Aware Scotland (WAS).

To define the needs, Phase 1 of the LARS programme involved Remade Scotland conducting structured interviews (face-to-face or by telephone) with the appropriate Waste Management Officers in all Scottish Local Authorities, who have responsibility for achieving national recycling and landfill diversion targets.

The interviews were used to identify the mechanisms for accessing and promoting good practices and types of support that Local Authorities in Scotland feel would help them achieve their targets.

¹ Argyll & Bute, Inverclyde, Highland, North Ayrshire, Renfrewshire, Shetland and West Dunbartonshire Councils

2.2. Aims & Objectives

The aim of this project was to help COSLA identify and evaluate the information and support its members' needs to deliver national recycling targets.

The project objectives were to:

- Conduct a structured interview with decision-makers, with responsibility for achieving recycling targets, in each of Scotland's 32 Local Authorities;
- Produce individual summary reports of each Authority's information and support needs;
- Produce a national overview of Scotland's Local Authority information and support needs; and
- Make recommendations to COSLA and the Scottish Government about how identified information gaps can be addressed, what research is needed and what are the priorities.

3. Methodology

This section outlines the general approach for assessing Council waste management research and support needs.

3.1. Project Overview

A COSLA-led² Steering Group was initiated to ensure that Remade Scotland's research team was focussed on evaluating Local Authority needs and had access to the appropriate officer in each Council.

The Steering Group decided that the most effective means of evaluating Council research and support needs would be by conducting one-to-one interviews with decision-makers responsible for achieving Council waste management targets. COSLA provided contact details for each Council.

The interview format and questions were agreed in advance and piloted with Councils represented on the Steering Group. Once the final format was agreed, the research team contacted individual Councils to agree dates for the interviews (for more information, please refer to Appendix A).

Notes summarising these interviews were produced for each Council and used to identify research and support needs, as detailed in Section 4. The overall project flow is illustrated by Figure 1 (in page 9).

3.2. Structured Interview: Rational & Questions

The Steering Group and research team agreed that to standardise data collection and expedite the needs assessment a common format should be adopted. The interview flow, questions and associated rationale agreed are provided below.

The interviews were planned to follow a defined path, which started with a scene-setting evaluation of current service provisions, treatment arrangements and plans, followed by a discussion of specific priority areas where research and support would be valuable, and followed by an all-embracing question to capture any issues not covered previously. The questions and their rationale are detailed below.

The first question gave Councils the opportunity to set the general scene of how they proposed to develop their waste management and recycling activities to achieve national recycling targets. As a guide, the conversations around this topic were structured around present arrangements, followed by plans for the 2010 and 2013 targets, as well as those beyond 2020. The actual questions presented to Councils were:

Q1. How does the Council envisage meeting its recycling and landfill diversion targets?

² The Steering Group included: Argyll & Bute, Inverclyde, Highland, North Ayrshire, Renfrewshire, Shetland, West Dunbartonshire, WRAP, Waste Aware Scotland and Remade Scotland.

To help identify research and support needs, Councils were asked to consider up to ten priority areas where they felt research and support would be valuable and would enhance/contribute to efforts to achieve the targets identified in the first question. Question 2 adopted a layered approach, inviting Councils to discuss each individual priority area, the benefits they hoped to realise from addressing these; the type of research and support they thought would be valuable; their understanding of the extent this type of research or support is currently available; whether they had tried to access it the past; and finally how they would prefer to access this type of support. The actual question presented to Councils was:

Q2. Please list five to ten priority areas that you anticipate will have an impact on your ability to achieve your recycling targets. For each of the 'priority areas' identified in Q2, please state:

- i. What issues/barrier do you associate with these priority areas?**
- ii. What benefits do you hope to realise from addressing these priority areas?**
- iii. What support/information do you require to overcome these issues/barriers and realise associated opportunities?**
- iv. Have you sought this support/information before?**
- v. Ideally, how would you like this support/information made available/delivered?**

This layered interviewing format helped clarify the extent to which Councils use external information/assistance to complement their own expertise and helped unearth how internal and external data was used to inform Councils' approach to achieving targets. It was also designed to help identify opportunities for improving the dissemination and sharing of good practice information.

The expectation was that the majority of research and support needs would be identified by the first two questions. However, Councils were nonetheless given an opportunity to identify and discuss any other issues, which may have not been captured by the previous questions, with a final, all-embracing question, which was presented as follows:

Q3 Are there any other issues that the Council feels it could benefit from with better information or support?

3.3. Interview Validation: Summary Notes

These questions were used to structure notes summarising conversations with each Council and identifying their priority areas and individual research and support needs. Councils were subsequently given the opportunity to review the notes and provide further feedback as appropriate and this became the official record of the interviews.

3.4. Identifying Common Research & Support Topics

The revised interview notes were analysed to identify the type of research and support that Councils felt would be valuable in helping them achieve their waste management targets. The findings from this evaluation are detailed in the following section.

For ease of analysis, research and support topics were grouped into related categories according to themes and listed by popularity, i.e. number of Councils identifying a particular piece of research and support as valuable.

To further facilitate the analysis and help COSLA prioritise research and support topics, each sub-section concludes with a summary table, which uses a traffic light system to outline the existing availability of information, as identified by Councils, and details of the preferred format for any outputs.

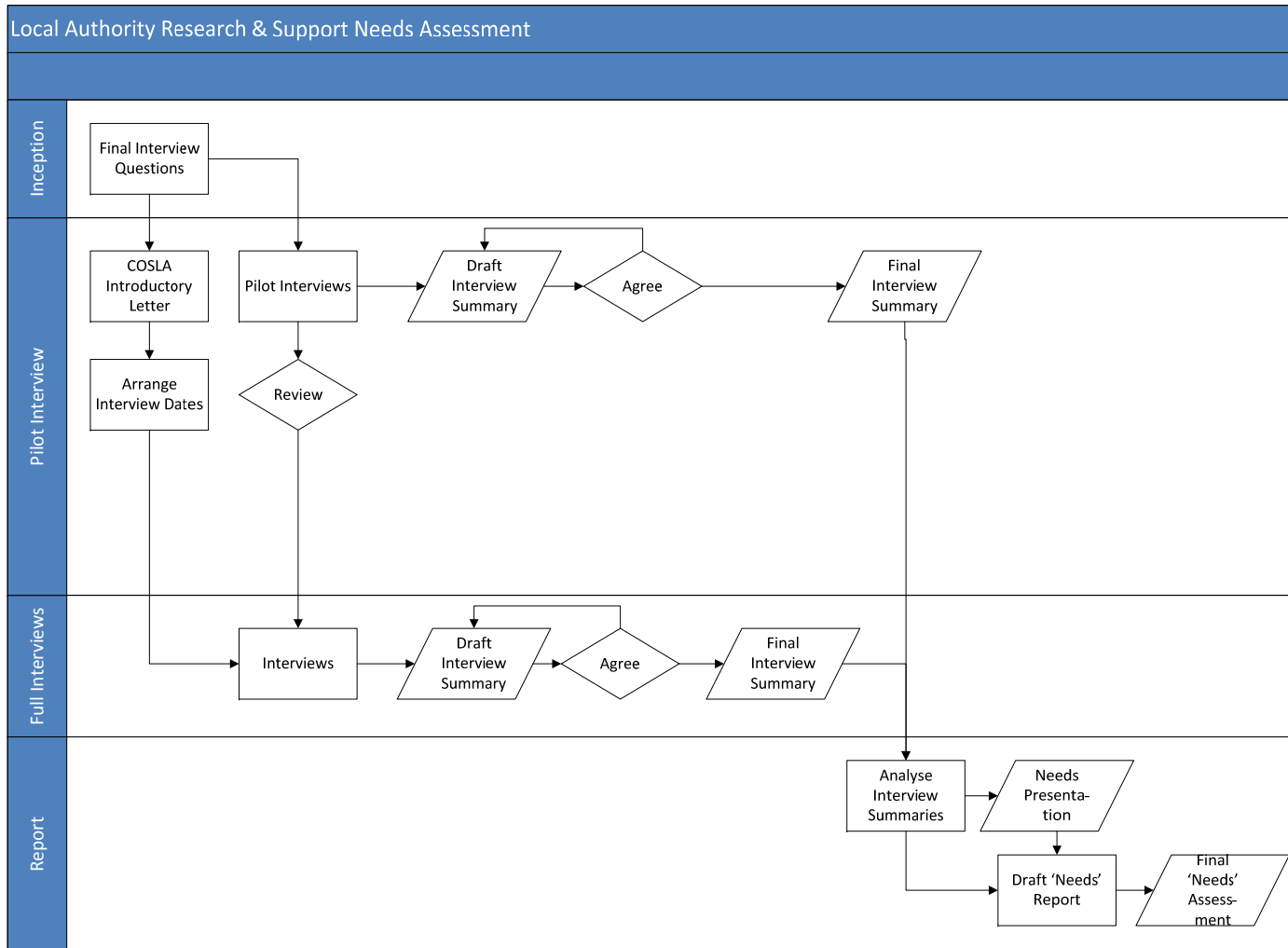


Figure 1 Project flow

4. Needs Assessment Results

All Scottish Local Authorities were interviewed between 8th September 2008 and 12th January 2009 and summary notes were produced for each interview. These were analysed to identify common areas where support and research was identified as valuable.

The 32 Scottish Councils identified 54 research and support topics, which were categorised into 9 broad themes. An additional 7 topics, which did not naturally fit into any of these 9 categories, were grouped together as “other topics”.

Figure 2 illustrates the number of Councils identifying research and support topics within each broad theme. Each of these topics is discussed below.

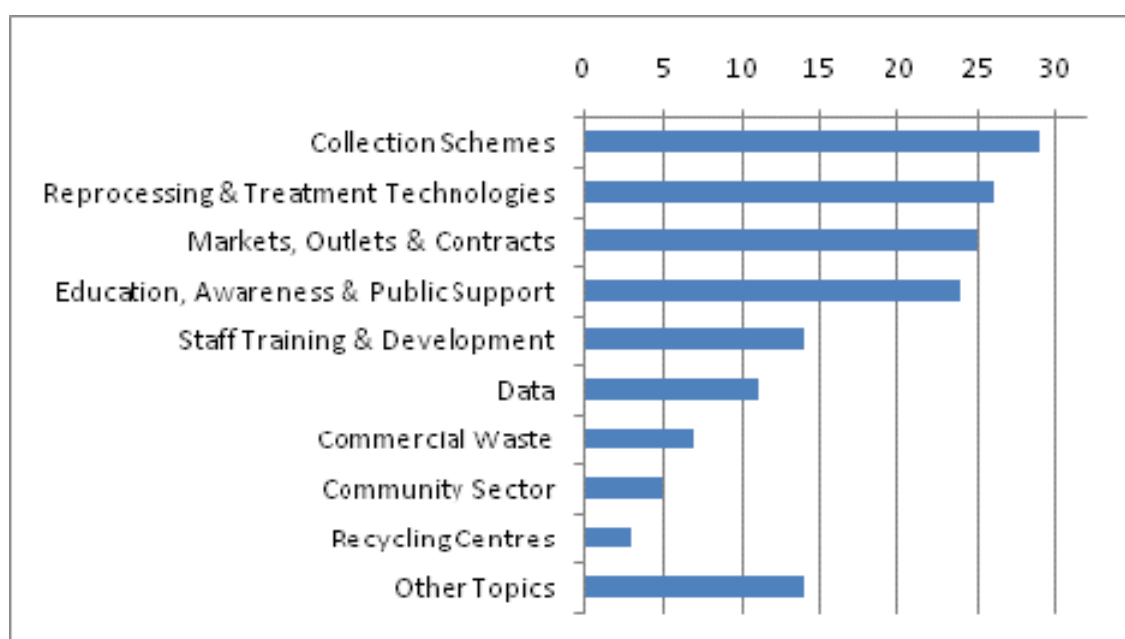


Figure 2 Number of Councils identifying research and support topics within each theme.

4.1. Collection Schemes

29 Councils identified 11 research and support topics under the broad heading of collection schemes (Figure 3).

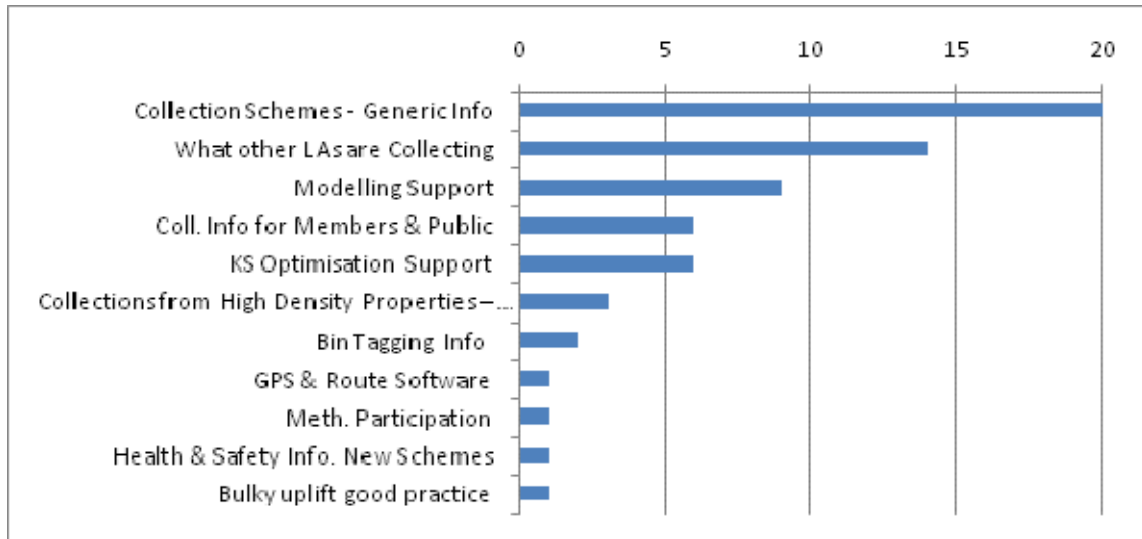


Figure 3 Number of Councils identifying research and support needs around collection schemes

Generic Information for Collection Schemes

Although a significant majority of Councils recognise the role that residual treatment and reprocessing technologies will play in delivering the mid- to long-term targets, there was widespread consensus that collection schemes would be the mechanism for achieving the immediate targets.

Twenty Councils expressed an interest in accessing generic information that would give Officers a better understanding of different collection approaches and their performance. The type of information noted as being of interest included costs (OPEX & CAPEX); yield and contamination (kg/HH/week); typical participation levels; contribution to recycling performance; uncertainties/concerns; and vehicles and containers used.

This information is seen as important to encourage service development and efficiency drives. The information could be presented in a variety of formats, including raw benchmarking data, case studies and direct technical support (advice and modelling). Support sourcing data in a format tailored to individual Council's data needs was seen as a valuable tool.

Although some Councils have accessed this type of information, publicly available through Remade Scotland, WRAP and APSE reports, most found it difficult to source data which they could readily use to compare their own operations. SEPA's Waste Data Digest was also used by some Councils, but its value was somewhat limited, as the data is generally 18 months out of date by the time it is released into the public domain. Some Councils also subscribed to AskJennie.com and the discussion forum on LARAC's website.

The collection schemes that were of most interest to Councils were alternate weekly collections and food waste services.

The following Councils were interested in accessing this information: Aberdeen, Angus, Argyll & Bute, Clackmannanshire, Dundee, East Dunbartonshire, East Lothian, East Renfrewshire, Falkirk, Fife, Highland, Inverclyde, Midlothian, Moray, North Ayrshire, North Lanarkshire, Perth & Kinross, South Lanarkshire, West Dunbartonshire and Western Isles.

Details of Materials other Councils are Collecting

To maximise the recycling performance and ensure that materials with suitable outlets are collected for recycling, 13 Councils replied that they would welcome information on materials their colleagues were collecting (including 'marginal waste streams'), how they were collecting these and where these were being sent for recycling.

The main source of information for this type of comparison is currently through informal discussions with members of COSLA's Waste Managers Network and SEPA's Waste Data Digest. However, several Councils noted that within this context, Waste Data Flow training could help understand what other Authorities are doing.

Authorities interested in collection scheme performance information and data include: Aberdeenshire, Dundee, East Dunbartonshire, East Lothian, Edinburgh, Falkirk, Inverclyde, Midlothian, North Ayrshire, North Lanarkshire, Renfrewshire, South Ayrshire, West Dunbartonshire and West Lothian.

Collection Scheme Appraisal - Modelling Support

Nine Councils expressed an interest in receiving modelling support to help evaluate their recycling and diversion performance under different service configurations. The support ranged from direct technical assistance to the provision of a modelling tool.

Some Councils have tried using WRAP's KAT tool, but the general consensus was that it was not sufficiently flexible to model their specific requirements. This perceived lack of flexibility, or Councils unfamiliarity with specific modelling tools, led some to request direct modelling support.

Councils interested in receiving modelling support include: Aberdeenshire, Argyll & Bute, Dumfries & Galloway, Glasgow, Midlothian, Moray, North Ayrshire, Perth & Kinross and Stirling

Information for Elected Members and Public

In addition to understanding costs and performance, six Councils were interested in having access to information that could be used to engender support from Elected Members and the general public for specific collection services.

The support could include interviews with Elected Members and/or the general public from areas where particular services had been implemented. Some Councils noted that public satisfaction surveys could be used as part of this process. This

support could be made available as downloadable podcasts or survey reports, which Officers could access as and when required.

Councils interested in this type of research and support included: Dundee, East Lothian, East Renfrewshire, Edinburgh, Fife and Renfrewshire.

Kerbside Optimisation Support

Under this theme two interrelated areas of support were identified. The first, identified by East Lothian and Inverclyde, was for assistance drawing more out of existing resources in kerbside services (“sweating assets”) in terms of performance, yield and reduced costs.

The second was about capacity building and enabling Officers and operational managers to use route performance information to identify areas to target public intervention campaigns to foster greater use of the services offered. Glasgow, Inverclyde, Shetland and Western Isles said that they would be interested in support developing these skills.

Collections from High Density Properties – Good Practice

Regarding collection scheme performance information, three Councils said that they were interested in accessing information on good practice/guidance for collecting from high density residential areas. One of these Councils suggested that it would be worthwhile engaging with large city Authorities in England to understand how they tackled the issue.

Such good practice information could be provided primarily as case studies, but could also include site visits and interviews with Officers.

The three Councils interested in this information were Edinburgh, Glasgow and Inverclyde.

Public Justification of Container Tagging – Potential Approaches

The use of container tagging for measuring route specific participation levels and potential application for enforcing “no side waste” and “one container” policies was considered. Two Councils, Aberdeenshire and West Lothian, were interested in exploring container tagging, but were concerned that public opposition might prevent them from proceeding. These Councils would welcome unbiased case-studies detailing how others have deployed and used bin tagging, particularly how they overcame any public opposition or reservations from other stakeholders.

GPS & Route Planning Software – Exploring Opportunities for Efficiencies

West Lothian was interested in understanding how routing software and GPS could help deliver service efficiencies. Although this Council is aware that suppliers have case studies detailing the benefits of their solutions, it was not aware of any independent reviews comparing different systems.

Participation – Standardised Methodology for Calculation

Aberdeenshire noted that the methodology for calculating participation appears to differ according to the collection scheme and said that a uniform methodology would be useful, particularly as it would facilitate comparison between schemes and Councils, as well as facilitating the identification of good practice.

Aberdeenshire have sought and used guidance from Remade Scotland on how to measure participation.

Health & Safety Implications of new Collections

East Lothian was interested in obtaining information on the health and safety risks of new collections (e.g. food waste collections). The Council was interested in accessing this information to facilitate the evaluation/selection of new services.

Officers have discussed this issue with colleagues in other Councils and although they are aware that the Health & Safety Executive publishes reports on various kerbside collections, they were not aware of any risk assessments for food waste collections.

Bulky Uplift Recycling

Inverclyde were interested in information about good practice on recycling bulky uplifts. They would find case studies and details of outlets for materials used by other Councils useful.

Summary of Research and Support

Table 1 summarises the research and support needs that Councils identified around collection schemes. The table includes details of Councils understanding of existing provision and using a quick reference traffic light system, details overall availability. The table also details the type of support and format that Councils would find valuable.

| Topic | Existing Provision (as identified by Councils) | | Research/Support Required (as identified by Councils) |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|---|-------------------------------------------------------------------------------------|
| Generic Information for Collection Schemes | Some info. from APSE, SEPA, WRAP, WAS, Remade Scotland, AskJennie & LARAC forum. | ● | Case studies, benchmarking data and technical support (e.g. for options appraisal). |
| Details of what Materials other Councils are Collecting | SEPA & informally from COSLA | ● | WDF training |
| Collection Scheme Appraisal - Modelling Support | WRAP KAT toolkit | ● | Modelling tool & direct modelling support. |
| Information for Elected Members and Public | | ● | Case studies, podcasts & opinion surveys. |
| Kerbside Optimisation Support | | ● | Guidance, technical support and training. |
| Collections from High Density Properties – Good Practice | | ● | Good practice guidance for recycling in high density residential areas. |
| Public Justification of Container Tagging – Potential Approaches | Supplier information. | ● | Case studies & good practice information. |
| GPS & Route Planning Software – Exploring Opportunities for Efficiencies | Supplier information. | ● | Review of available systems, solutions and applications. |
| Participation – Standardised Methodology for Calculation | WRAP & Remade | ● | Standardised methodology for all collection schemes. |
| Health & Safety Implications of new Collections | HSE has some reports | ● | Reports/reviews for new collection schemes (e.g. food waste). |
| Bulky Uplift Recycling | | ● | Case studies & good practice information. |

Table 1 Summary of “Collection Scheme” research and support Councils identified as being valuable.

Key for the traffic light system:

- = green, available to some extent,
- = yellow, limited availability
- = red, not available

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4.2. Reprocessing & Treatment Technologies

Twenty six Councils identified six broad research and support needs around reprocessing and treatment technologies (Figure 4).

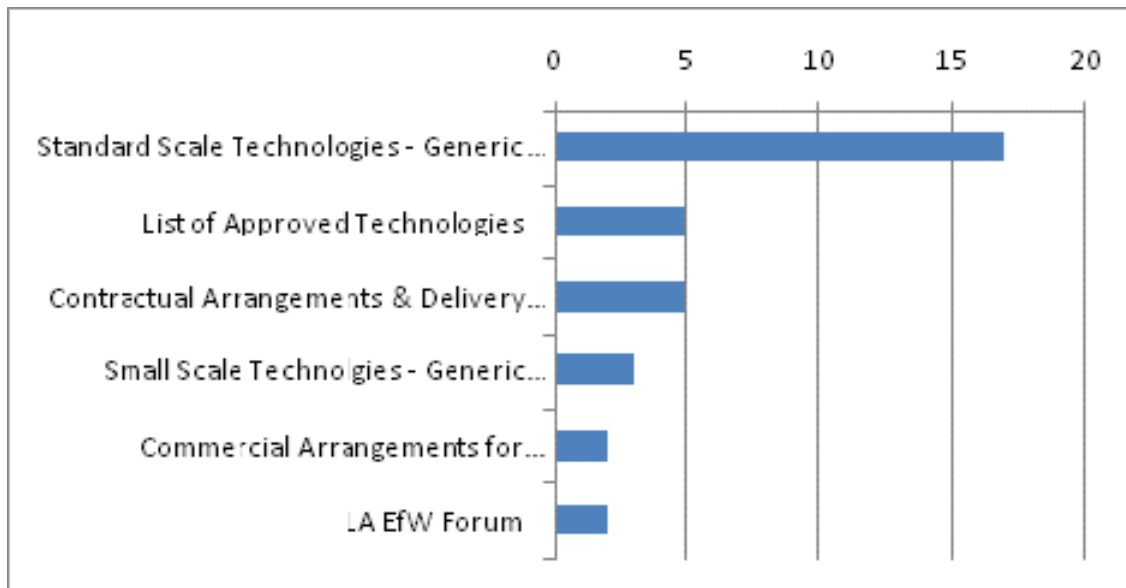


Figure 4 Number of Councils identifying research and support needs around reprocessing and treatment technologies.

Generic Technology Information

Additional reprocessing and treatment infrastructure was identified by many Councils as critical to their ability to meet both mid- and longer term recycling and landfill diversion targets.

Within this context, 17 Authorities expressed an interest in accessing generic information that would give Officers a better understanding of different reprocessing and treatment technologies. The type of information noted as being of interest included: costs (OPEX & CAPEX); typical gate fees; contribution to recycling performance; associated uncertainties/concerns; track record; and reference facilities.

This information is similar to that requested for collection schemes and is seen as valuable to help Councils identify suitable treatment technologies. The information could be presented as either case-studies, or technology overviews and modelling support to identify the required treatment capacity and contribution to recycling and landfill diversion targets.

Although no specific technologies or processes were specifically identified, it was widely suggested that information is provided for a wide range of technologies, including those better suited for dealing with the smaller quantity of waste generated by remote/island communities.

Generic information regarding reprocessing technologies was identified as useful by the following Authorities: Aberdeen; Dumfries & Galloway; Dundee; Edinburgh; Fife, Highland; Inverclyde; Midlothian; Moray; North Ayrshire; North Lanarkshire; Perth & Kinross; Scottish Borders; South Ayrshire; West Dunbartonshire and West Lothian. Orkney, Shetland and Western Isles were particularly interested in the smaller scale, remote/island community technologies.

Still within the context of generic information, Aberdeen Council was interested in having access, to peer-reviewed articles from academic journals, on the different health and environmental risks associated with different waste treatment processes and technologies. This type of information could be used by Council media teams to help appease potential concerns about the use of different technologies.

Approved Technologies

Some Councils expressed concerned that the timescales involved in procuring and commissioning new waste treatment facilities could impact on their ability to meet impending recycling and landfill diversion targets.

To reduce the time involved, five Councils thought it would be worthwhile to have a list of technologies 'approved' by the Scottish Government and SEPA. To expedite the selection of appropriate treatment capacity, the list could include details of the contribution these technologies could make towards achieving Scotland's Zero Waste aspirations and within the context of the different technology caps. 'Approved' technologies could also benefit from an expedited licensing process.

Although two Councils noted that the information on the DEFRA's demonstrator site was some what too basic, another noted that such a list could potentially be influenced by personal preferences of those controlling such a list.

The Councils interested in this support included: Aberdeenshire, Argyll & Bute, East Renfrewshire, Inverclyde and Stirling.

Contractual Arrangements & Delivery Models

Also to help expedite the development of additional waste treatment capacity, five Councils said they would be interested in learning about the different approaches to delivering the required infrastructure. Case studies detailing examples of different contractual arrangements, service delivery models (e.g. build, build and operate) and associated legal issues were identified as being of use to Clackmannanshire, Edinburgh, Glasgow, Inverclyde and Moray.

Commercial Arrangements for Distributing District Heating

EfW was identified a treatment technology with great scope for helping several authorities meet their landfill diversion targets without escalating collection costs.

Two Councils also said that they were interested in understanding the commercial arrangements, barriers and opportunities for distributing district heating. This is an area where the UK has limited experience. One Council was also interested in

learning about the different funding mechanism available for developing large waste management infrastructure (e.g. municipal bonds). These were Aberdeen and Angus.

Council EfW Forum

Two Councils suggested that they would find it useful if there was a forum for sharing information and experience about operating EfW facilities. The two Councils interested in the creation of such a forum were Aberdeen and Shetland.

Summary of Research and Support

Table 2 summarises the research and support needs that Councils identified around reprocessing and treatment technologies. The table includes details of their understanding of existing provision and using a quick reference traffic light system, details overall availability. The table also details the type of support and format that they would find valuable.






| Topic | Existing Provision (as identified by Councils) | | Research/Support Required (as identified by Councils) |
|------------------------------------------------------------------|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------|
| Technologies - Generic Information | Some available through DEFRA's WIP and supplier websites |  | Case studies & technology overview. Modelling support. |
| List of Approved Technologies | Not available |  | |
| Contractual Arrangements & Delivery Models | Not available in one location, although WRAP have some model contracts. |  | Case studies |
| Commercial Arrangements for Distributing District Heating | Not available. |  | Report |
| Council EfW Forum | |  | Facilitated forum |

Table 2 Summary of "Reprocessing & Treatment Technologies" research and support Councils identified as being valuable.

Key for the traffic light system:

-  = green, available to some extent,
-  = yellow, limited availability
-  = red, not available

4.3. Markets, Outlets & Contracts

Twenty five Councils identified a need for research and support in 6 topics around markets, outlets and contracts for recyclates and residual waste (Figure 5).

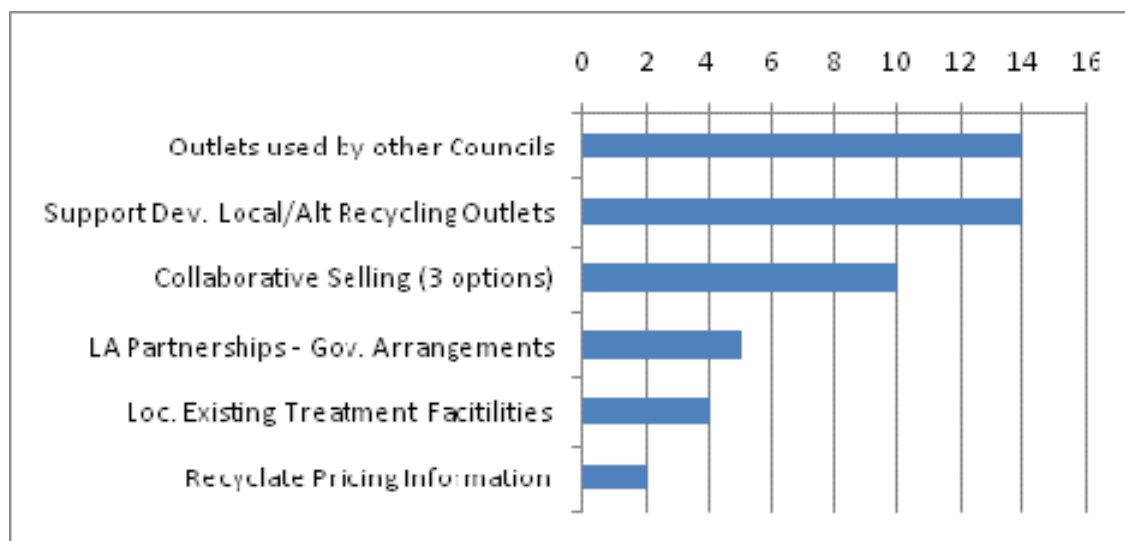


Figure 5 Number of Councils identifying research and support needs around markets, outlets and contracts for both recyclates and residual waste.

Outlets used by other Local Authorities

To assist the Scottish Government achieve its Zero Waste aspirations, Scottish Councils are exploring the potential for recycling as wide a range of materials as possible. To ensure that opportunities are not overlooked, 14 Councils expressed an interest in knowing what outlets for different waste streams their colleagues are using.

Some Councils suggested case studies and factsheets detailing this information, whilst others suggested Waste Data Flow.

The Councils interested in this type of support included: Aberdeenshire, Dundee, East Dunbartonshire, East Lothian, Edinburgh, Falkirk, Inverclyde, Midlothian, North Ayrshire, North Lanarkshire, Renfrewshire, South Ayrshire, West Dunbartonshire and West Lothian.

Development of Local/Alternative Outlets

Several Councils shared the view that the range of outlets for the materials they collected is limited and that this potentially makes them vulnerable to market volatility.

14 Councils suggested that more emphasis should be placed on developing recycling outlets and capacity, particularly for alternative technologies/processes, at both local and national level.

Diversity of recycling outlets will reduce Councils' dependence on individual organisations, increase competition for material collected and help protect their recycling performance. Greater recycling capacity will also lead to job creation and, at a local level, reduced greenhouse gas emissions.

The Councils interested in this type of support included: Angus, Clackmannanshire, East Ayrshire, East Dunbartonshire, East Lothian, Fife, Glasgow, Highland, Moray, North Ayrshire, South Ayrshire, South Lanarkshire, Stirling and West Lothian.

South Ayrshire and South Lanarkshire noted that limited outlets for mixed plastics was a particular problem, especially as plastic recycling was popular with residents and because they felt that to achieve the 70% recycling target, it would be necessary to tap this waste stream.

Collaborative Selling (3 Options)

The impact that falling price paid for recyclates has on Council budgets concerned several Councils.

Research into the potential, concerns and practical implementation of collaborative selling interested 10 Councils. Within this theme, the following three approaches were identified:

- Selling agency, of interest to Aberdeenshire, Falkirk and Perth & Kinross.
- Selling through a consortium, of interest to East Lothian.
- Joint selling, of interest to Aberdeenshire, Dundee, Highland, Perth & Kinross, Shetland, South Ayrshire and West Dunbartonshire.

To help Councils explore the opportunities available through collaborative selling, Highland Council noted that it would be useful to have access to facilitated discussions.

Local Authority Partnerships – Governance Arrangements

It is likely that several Councils will find that the most effective approach to achieving their recycling and diversion targets will be to work closely with colleagues to deliver service and procure treatment capacity.

Five Councils noted that they would be interested in learning about the formal arrangements between other UK local authorities to facilitate closer working/partnership to procure/deliver waste services/infrastructure.

The Councils interested in this type of research were Edinburgh, Inverclyde, Midlothian, North Ayrshire and Renfrewshire.

Information on the Location of Waste Treatment Capacity

Several Councils noted that it was unlikely that they would be able to commission appropriate treatment capacity in time to meet their earlier landfill diversion targets.

To help manage the risk of LAS penalties, four Councils would therefore be interested in receiving information on the location of existing and planned residual waste treatment facilities, which could be used on a short-term basis until their own treatment capacity becomes available.

Edinburgh, North Ayrshire, North Lanarkshire and South Ayrshire said they would be interested in this information.

Recyclate Pricing Information

To help secure the best possible price for the recyclates they collect, two Councils were interested in the following recyclate pricing information:

- Moray and Midlothian were interested in accessing a reliable source of up-to-date information on price paid for recyclates. One of these Councils was aware of WRAP's pricing service but did not use/participate in it.
- Moray was also interested in developing a better understanding of the critical factors that affect the price paid for recyclates.

Summary of Research and Support

Table 3 summarises the research and support needs that Councils identified around markets, outlets and contracts for recyclates and residual waste. The table includes details of Councils' understanding of existing provision and using a quick reference traffic light system, details overall availability. The table also details the type of support and format that they would find valuable.

| Topic | Existing Provision (as identified by Councils) | | Research/Support Required (as identified by Councils) |
|----------------------------------------------------------------|-----------------------------------------------------------------|---|----------------------------------------------------------------------------------------------|
| Outlets used by other Councils | Waste Data Flow Remade, WRAP, Council colleagues and AskJennie. | ● | Fact-sheets/Case studies and WDF training. |
| Development of Local/Alternative Outlets | WRAP, Remade, Scottish Enterprise | ● | |
| Collaborative Selling (3 Options) | | ● | Research into barriers and opportunities. Facilitated discussions to help overcome concerns. |
| Local Authority Partnerships – Governance Arrangements | | ● | Case studies, factsheets or report outlining partnership/joint working arrangements |
| Information on the Location of Waste Treatment Capacity | | ● | Location map/list of treatment facilities and available capacity. |
| Recyclate Pricing Information | WRAP, Remade, Commodity Indexes | ● | Research reports and signposting to indices. |

Table 3 Summary of “Markets, Outlets and Contracts” research and support Councils identified as being valuable.

Key for the traffic light system:

- = green, available to some extent,
- = yellow, limited availability
- = red, not available

4.4. Education, Awareness & Public Support

Twenty four Councils identified 13 topics where additional research and support would be helpful, although only 8 were identified by more than one Council (Figure 6).

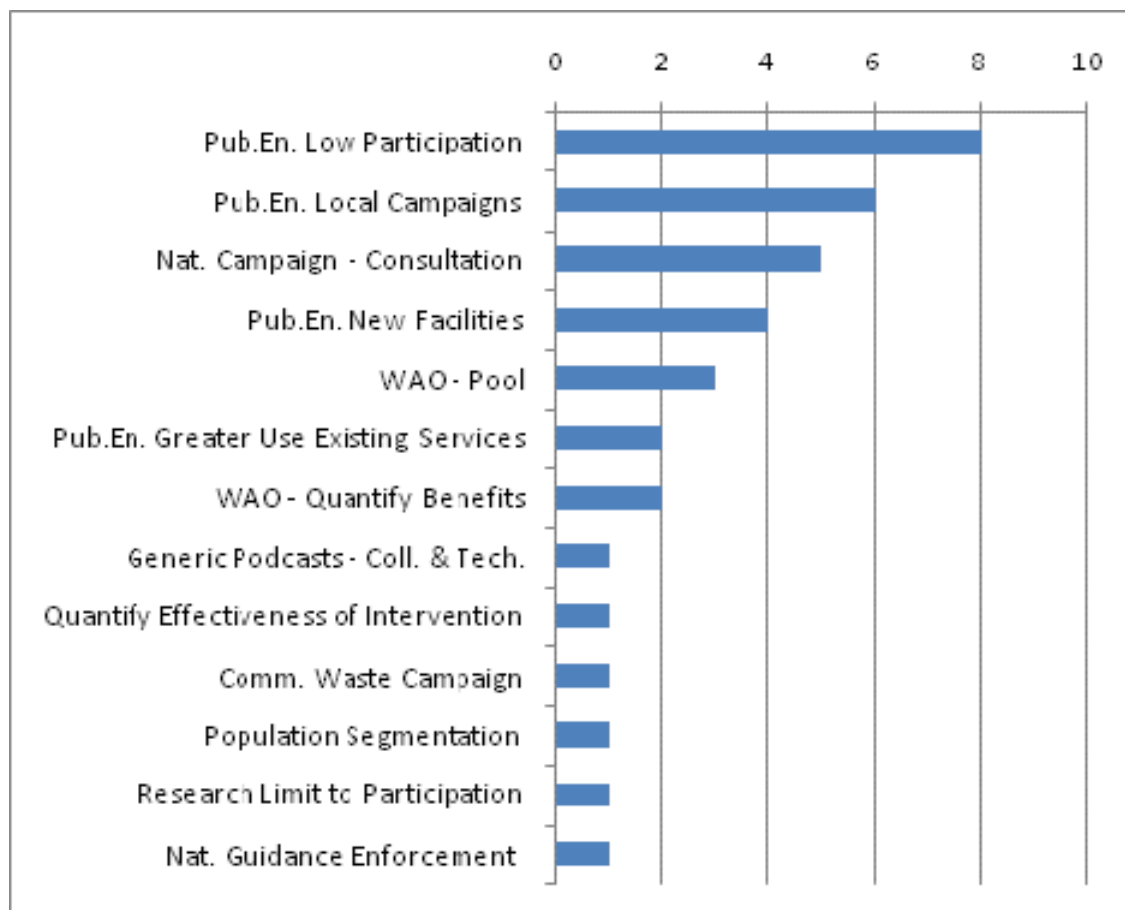


Figure 6 Number of Councils identifying research and support needs around Awareness and public support.

Public Engagement - Low Participation Areas

8 Councils were interested in understanding how to engage with residents in low participation areas (including residents in high-rise apartment blocks) and new schemes (food and alternate week collections).

The support required ranged from good practice case studies (from similar cities/authorities), engagement strategies and methodologies to messages for different socio-economic groups.

The Councils interested in this support were Aberdeen, East Lothian, East Renfrewshire, Edinburgh, Glasgow, Highland, Inverclyde and Midlothian. Some of these already benefit from some support from WAS.

Public Engagement – Local Campaigns

Five Councils wanted support with wider engagement initiatives and national campaigns that could be localised. Angus, East Ayrshire, North Lanarkshire, Scottish Borders and South Ayrshire were interested in this type of support.

East Renfrewshire, on the other hand, indicated that it could benefit from specific support promoting, and overcoming resistance to, a separate/additional container for a potential food waste collection.

National Campaign - Consultation

Three Councils would welcome an opportunity to be consulted on/input to the content of the national recycling awareness campaign to ensure that it will support and enhance their recycling/waste minimisation initiatives/messages. The three were East Ayrshire, North Ayrshire and Scottish Borders.

North Lanarkshire said it would welcome a simpler recycling message, as it felt that members of the public generally did not understand the purpose of recycling, or that it is part of a national effort (rather than just an initiative by their local authority) and that sometimes it appeared that they got confused by messages from other Councils.

Within a similar context, particularly of longer term public engagement, Highland Council would welcome a debate on how to engage with the public to achieve the participation levels necessary to achieve the 2025 Zero Waste recycling targets.

Public Engagement – New Facilities

Three other Councils noted that many will have to build new waste treatment infrastructure/facilities and at that time it is likely that they may need to overcome public opposition (i.e. the NIMBY effect).

Renfrewshire, Scottish Borders and West Dunbartonshire suggested that it may be worthwhile engaging with the public, at both national and local levels, to raise their awareness of the need for new facilities and reduce/overcome opposition.

At a more local level, Scottish Borders was interested in support and guidance on how to engage with communities, rather than individuals, to overcome potential opposition to new/expanded waste treatment facilities.

Pool of Waste Aware Officer

Some of the Councils interviewed noted that they had limited resources to support members of the public during new service roll-out or engage with them to promote existing services.

To overcome this, three Councils suggested that it would be useful to have a pool of Waste Aware Officers (WAO) that Councils could source staff from as required. Argyll & Bute, East Dunbartonshire and North Ayrshire said that they would find this type of support useful.

Public Engagement – Greater Use of Existing Services

Although this area of support has similarities with assistance engaging with the public in low participation areas, the emphasis in this case was to encourage the public to segregate a greater proportion of their waste stream; i.e. recycle more.

North Ayrshire and Western Isles Councils said that they would welcome support, such as guidance and engagement models/templates, in this area.

Quantifying the benefits of Waste Awareness Officers

Although most Council recognised the value of having Waste Aware Officers (or similar) to engage with members of the public, two found it difficult to secure internal funding for this type of post.

Inverclyde and Orkney would therefore like assistance in quantifying the benefits from the contribution to recycling performance and associated avoided disposal costs and landfill tax made by Waste Awareness Officers, to support their requests for these staff.

The support could be provided as a series of case studies from other Councils that employ this type of officer.

Generic Podcasts Explaining Collection Schemes & Technologies

One Council noted that sometime a poor understanding of different collection schemes or treatment technologies was often at the root of opposition from Elected Members and the general public.

To facilitate the process of overcoming/avoiding potential opposition, Renfrewshire noted that it would be useful to have access to generic podcast that Councils could email/upload to their websites and use as a mechanism for raising understanding of collection schemes/technologies.

Quantifying the Value of Different Interventions

To enable it to target limited resources effectively, Clackmannanshire was interested in accessing research that quantified the impact of different interventions (e.g. awareness/engagement campaigns or collection schemes) in terms of cost in relation to tonnes diverted (or similar).

Although the information could initially be presented as a report to ensure continuity and relevance, it would perhaps be better if this information was presented as a series of case studies/fact sheets with a common format.

Commercial Waste Recycling Campaign

North Ayrshire would welcome support promoting trade waste recycling, perhaps under the auspices of a national initiative. The support required could mirror that available to promote domestic waste recycling.

Population Segmentation

West Lothian was interested in guidance on how to segment its residents into different groups, as they believe this information would enable them to use engagement initiatives/awareness messages targeted at specific groups.

Limit to Participation

Aberdeenshire was interested in support evaluating whether there is a natural limit to public participation in different recycling schemes: This information would support the development of new services and planning for residual treatment capacity, as it would enable the Council to understand the maximum contribution from each scheme.

National Guidance on Enforcement

One Council, with a positive experience of implementing a stricter enforcement stance on the presentation of waste and recyclates, suggested that depoliticising the issue could help other Councils benefit from this comparatively inexpensive tool to encouraging residents to use services effectively. Stirling noted that guidance from the Scottish Government could help other Councils adopt a tougher enforcement stance and improve their recycling performance.

Summary of Research and Support

Table 4 summarises the research and support topics that Councils identified around education, awareness and public support. The table includes details of their understanding of existing provision and using a quick reference traffic light system, details overall availability. The table also details the type of support and format that they would find valuable.

| Topic | Existing Provision (as identified by Councils) | Research/Support Required (as identified by Councils) |
|---------------------------------------------------------------|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Public Engagement in Low Participation Areas | WAS | ● Good practice case studies, engagement strategies and methodologies and socio-economic specific messages. |
| Public Engagement – Local Campaigns | WAS | ● Campaign support & localisation. |
| Public Engagement - New Facilities | | ● Nat. and local debate/campaign raising awareness and justifying need for new waste facilities. |
| Pool of WAO | WAS | ● Pool of WAO that Councils could tap into as required. |
| Public Engagement –Greater Use of Existing Services | | ● Guidance & engagement models. |
| Quantifying the benefits of Waste Awareness Officers | | ● Case study highlight, in quantifiable terms, WAO's the benefits and contribution to recycling performance. |
| Generic Podcasts Explaining Collection Schemes & Technologies | | ● Video podcasts explaining how different collection schemes and treatment technologies work. |
| Quantifying the Value of Different Interventions | | ● Report, case study or fact sheets. |
| Commercial Waste Recycling Campaign | | ● Similar to the support available promoting domestic waste recycling. |
| Population Segmentation | | ● Guidance on how to segment population into different socio economic groups. |
| Limit to Participation | | ● Research report |
| National Guidance on Enforcement | | ● Guidance outlining approach and good practice. |

Table 4 Summary of research and support around "Education, Awareness & Public Support" that Councils identified as being valuable.

Key for the traffic light system:

- = green, available to some extent,
- = yellow, limited availability
- = red, not available

4.5. Staff Training & Development

14 Councils identified 3 topics of research and support around staff training and development that they would find helpful (Figure 7).

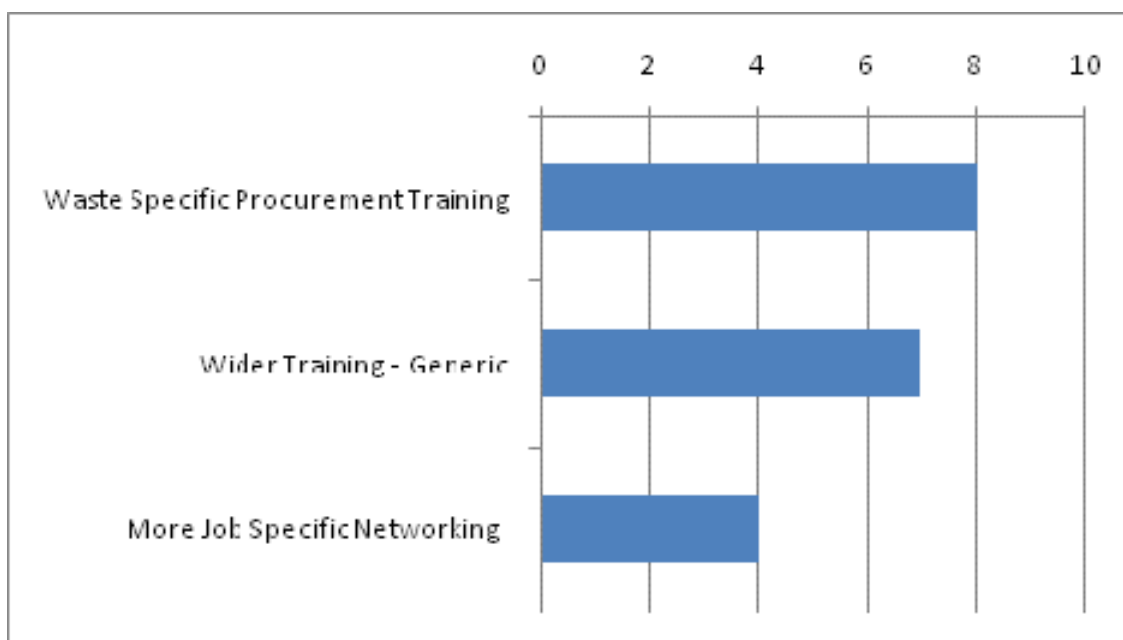


Figure 7 Number of Councils identifying research and support needs around Staff Training & Development.

Waste Specific Procurement Training

Several Councils noted that to achieve their medium- to long-term recycling and landfill diversion targets it was very likely that they would have to procure either additional direct treatment capacity or services.

However, eight Councils noted that their Officers, particularly Junior Officers had limited procurement experience and that there was a need for waste specific procurement training to ensure that waste officers and procurement professionals could work together effectively. Some of the support requested was also around framework documents and specification templates.

The following Councils identified this support as useful: Clackmannanshire, Dundee, Highland, Inverclyde, Midlothian, North Ayrshire, Renfrewshire and West Dunbartonshire.

One Council was aware of procurement information from WRAP and noted that there might be scope for Excel Scotland to inputting into the process.

Wider Training - Generic

Councils also recognised a wider need to enhance the skill and knowledge base for all staff, from frontline operatives to service managers.

Training identified as useful included improving operatives' understanding of the wider context of services delivered as well as more operational-centred training for supervisory/managerial staff. Although some Councils noted that training material was already available through SVQ system, WRAP, WAS and StreetSafe Sam (from Energy & Utility Skills), this was not necessarily as widely available/accessible as it could be.

The following Councils would welcome support in this area: Clackmannanshire, East Dunbartonshire, Renfrewshire, South Ayrshire, Shetland, West Dunbartonshire and West Lothian.

More Job Specific Networking

Several Councils felt that it was not practical to send more than a small number of staff to existing networking events, primarily because they could not afford to release Officers for the time necessary to attend distant events. Some also noted that the topics covered at many of these networking events were not sufficiently practical to justify releasing Officers to attend.

It was suggested that greater use of the internet, through blogs, discussion forums and lists, and webinars, should be encouraged to develop more accessible networking opportunities.

Aberdeenshire, East Ayrshire, Inverclyde and Renfrewshire said they would welcome networking opportunities that were accessible to a greater number of individuals.

Summary of Research and Support

Table 5 summarises the research and support needs that Councils identified under the broad theme of staff training and development. The table includes details of their understanding of existing provision and using a quick reference traffic light system, details overall availability. The table also details the type of support and format that they would find valuable.

| Topic | Existing Provision (as identified by Councils) | | Research/Support Required (as identified by Councils) |
|--------------------------------------------|---------------------------------------------------|---|----------------------------------------------------------|
| Waste Specific Procurement Training | WRAP & Excel Scotland | ● | Independent training, guidance and document templates. |
| Wider Training - Generic | SVQ, WRAP, WAS and StreetSafe Sam (EU Skills) | ● | Greater availability & more accessible |
| More Job Specific Networking | CIWM, WRAP, WAS, Remade, CEC events | ● | More 'distance' forums & webinars |

Table 5 Summary of "Staff Training & Development" research and support Councils identified as being valuable.

Key for the traffic light system:

- = green, available to some extent,
- = yellow, limited availability
- = red, not available

4.6. Data

11 Councils identified 5 areas around data where research and support would be helpful. Three of these research and support needs were identified as useful by more than one Council (Figure 8).

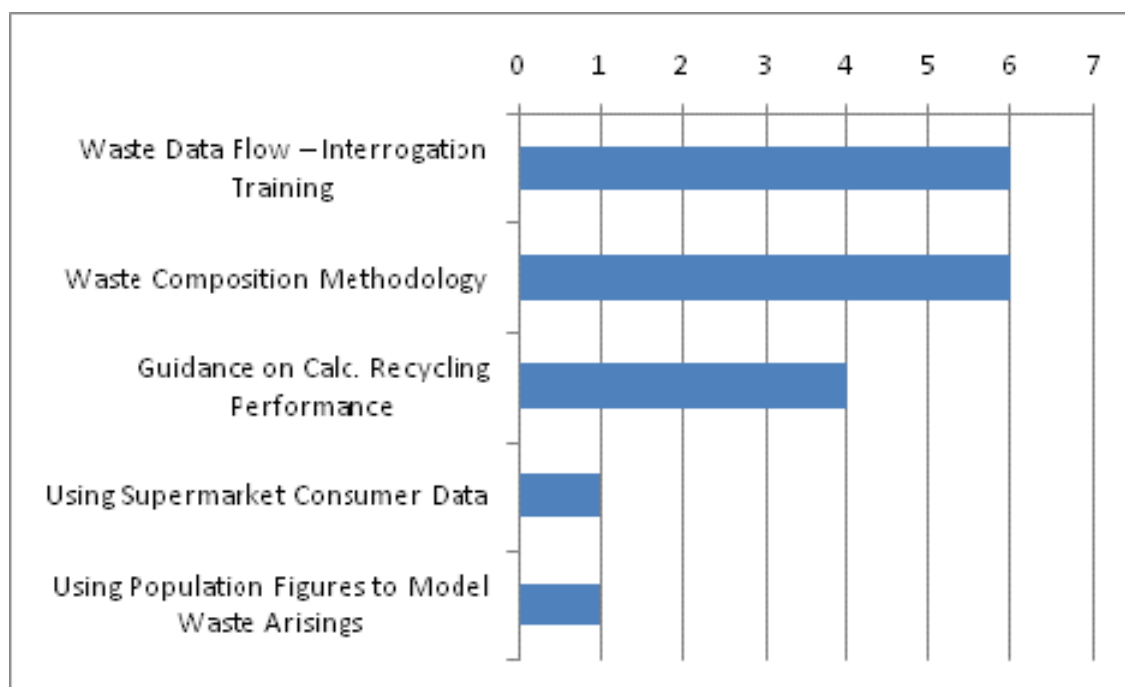


Figure 8 Number of Councils identifying research and support needs around data.

Waste Data Flow – Interrogation Training

Several Councils were concerned that widely available figures on recycling performance did not permit an accurate comparison of efforts or offer any scope for identifying additional opportunities for recycling. Some also noted that the data available through SEPA’s Waste Data Digest was considerably out of date by the time it was published.

Six Councils said that they would be interested in learning how to use Waste Data Flow to benchmark/compare the waste/recycling services their Authority delivers against those delivered by similar authorities. For Councils with limited staff resources, on-demand comparison service would be useful.

Amongst these, two felt that there was scope for simplifying the current data entry/reporting process for Waste Data Flow, so that much of it could be automated, e.g. by using direct input from weighbridges.

Councils interested in this type of support include Aberdeenshire, Clackmannanshire, Glasgow, North Lanarkshire, Scottish Borders and West Lothian.

Waste Composition Methodology

To facilitate information-driven assessments of existing service performance, and assessing the potential for new services, six Councils would welcome a national waste composition methodology for domestic waste, whilst two would also welcome a methodology for commercial waste.

The Authorities interested in these methodologies were Glasgow, Highland, Midlothian, North Lanarkshire, West Dunbarton and West Lothian.

Guidance Calculating Recycling Performance

Four Councils were interested in understanding how their recycling performance is calculated, particularly what materials can be used. This information could help Elected Members understand why other countries/authorities appear to have significantly higher recycling rates.

Angus, North Lanarkshire, South Lanarkshire and West Lothian said they would be interested in simplified guidance explaining how their recycling rate was calculated.

Using Supermarket Consumer Data

As a result of a recent initiative, Clackmannanshire was working with a national supermarket to explore opportunities for accessing consumer data collected through their loyalty card.

Clackmannanshire was interested in research evaluating whether there was any scope for this data to understand waste arisings and why goods and products become waste.

Using Population Figures to Model Waste Arisings

Midlothian was interested in using population data and growth projects to model changes in waste arisings, but was concerned about the variations in per capita arisings reported by different Councils.

They would therefore welcome research offering guidance on how to use this type of data to estimate changes in waste arisings.

Summary of Research and Support

Table 6 summarises the research and support needs that Councils identified around data. The table includes details of Councils understanding of existing provision and using a quick reference traffic light system, details overall availability. The table also details the type of support and format that they would find valuable.

| Topic | Existing Provision (as identified by Councils) | | Research/Support Required (as identified by Councils) |
|---------------------------------------------------------|-------------------------------------------------------|---|--------------------------------------------------------------------------------------------------------------------|
| Waste Data Flow – Interrogation Training | Waste Data Digest and Waste Data Flow, Remade Reports | ● | Waste Data Flow user training and on-demand comparison service. |
| Waste Composition Methodology | SEPA, Remade & WRAP | ● | Finalised waste composition methodology |
| Guidance Calculating Recycling Performance | SEPA | ● | Simplified guidance. |
| Using Supermarket Consumer Data | | ● | Research about scope and methodology for using this type of data to determine why goods and products become waste. |
| Using Population Figures to Model Waste Arisings | | ● | Research and guidance on how to use population data. |

Table 6 Summary of the research and support that Councils identified as valuable for the data theme.

Key for the traffic light system:

- = green, available to some extent,
- = yellow, limited availability
- = red, not available

4.7. Commercial Waste

7 Councils identified 6 areas around commercial waste where they felt that research and support would be helpful (Figure 9).

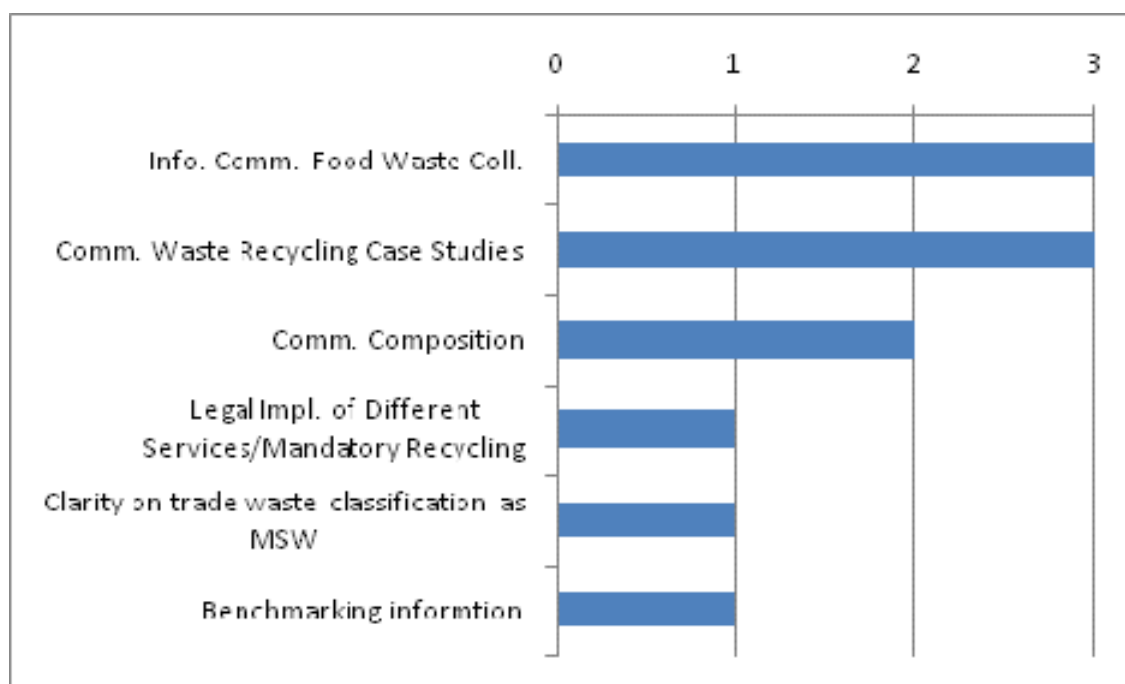


Figure 9 Number of Councils identifying research and support needs around commercial waste

Commercial Food Waste Collections – Case Studies

East Lothian, Inverclyde and Western Isles are considering food waste collections from commercial premises and to ensure cost effectiveness/value for money they would welcome information on indicative costs, performance and good practice.

Commercial Waste Recycling – Case Studies

East Dunbartonshire, East Renfrewshire and Western Isles Councils expressed an interest in learning how other Authorities have encouraged their trade waste customers to segregate waste for recycling. This information could be presented as a series of case studies.

Commercial Waste Composition Methodology

To drive their recycling performance, West Dunbartonshire and Highland indicated that they were interested in obtaining a better understanding of commercial waste composition, so that they could develop commercial waste recycling services targeting the highest proportion of the waste stream.

Highland Council mentioned some research currently commissioned by DEFRA and by a neighbouring Authority (to which they have been given access).

Clarity on the Legal Implications of Offering Different Services/Mandatory Recycling for Commercial Waste Customers

To facilitate trade waste recycling, Moray Council was interested in understanding the legal implications of mandating trade waste customers to segregate their waste or offering different collection services to clients in different locations. [Highland]

However, in subsequent interviews, another Council was identified as being in the early stages of introducing mandatory commercial waste recycling.

Clarity on Trade Waste Classification as MSW

Highland Council would also appreciate clarity on when waste arising in commercial premises is classified as MSW and when it is not.

This Council felt that classifying commercial waste as MSW based on who collects it placed it at an unfair disadvantage, primarily because recycling targets apply only to waste collected by the Council. Coupled with the fact that the private operators can be selective about where they operate and level of service they offer, and that Councils cannot use client location as a basis for determining charges, means that Councils are often burdened with comparatively expensive, uneconomic commercial waste operations.

Support Benchmarking Trade Waste Services

To facilitate the review process for commercial waste charges, East Dunbartonshire Council wanted support to review and benchmark its trade waste service. Such a review could be used to help overcome political opposition to increases in waste charges to reflect increases in fuel price and landfill tax.

Summary of Research and Support

Table 7 summarises the research and support needs that Councils identified around commercial waste. The table includes details of their understanding of existing provision and using a quick reference traffic light system, details overall availability. The table also details the type of support and format that they would find valuable.

| Topic | Existing Provision (as identified by Councils) | Research/Support Required (as identified by Councils) |
|------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------------------------------------------------|
| Commercial Food Waste Collections – Case Studies | | ● Case study with indicative costs, performance and good practice. |
| Commercial Waste Recycling – Case Studies | | ● Case studies outlining how different Councils have encouraged trade clients to recycle. |
| Commercial Waste Composition Methodology | DEFRA research & Moray Council | ● National waste composition methodology for commercial waste |
| Clarity on legal implications of offering different services/mandatory recycling for commercial waste customers | | ● |
| Clarity on trade waste classification as MSW | | ● |
| Support benchmarking trade waste services | | ● |

Table 7 Summary research and support around commercial waste that Councils identified as useful.

Key for the traffic light system:

- = green, available to some extent,
- = yellow, limited availability
- = red, not available

4.8. Community Sector

5 Councils identified 2 areas of research and support for the community that they felt would be helpful (Figure 10).

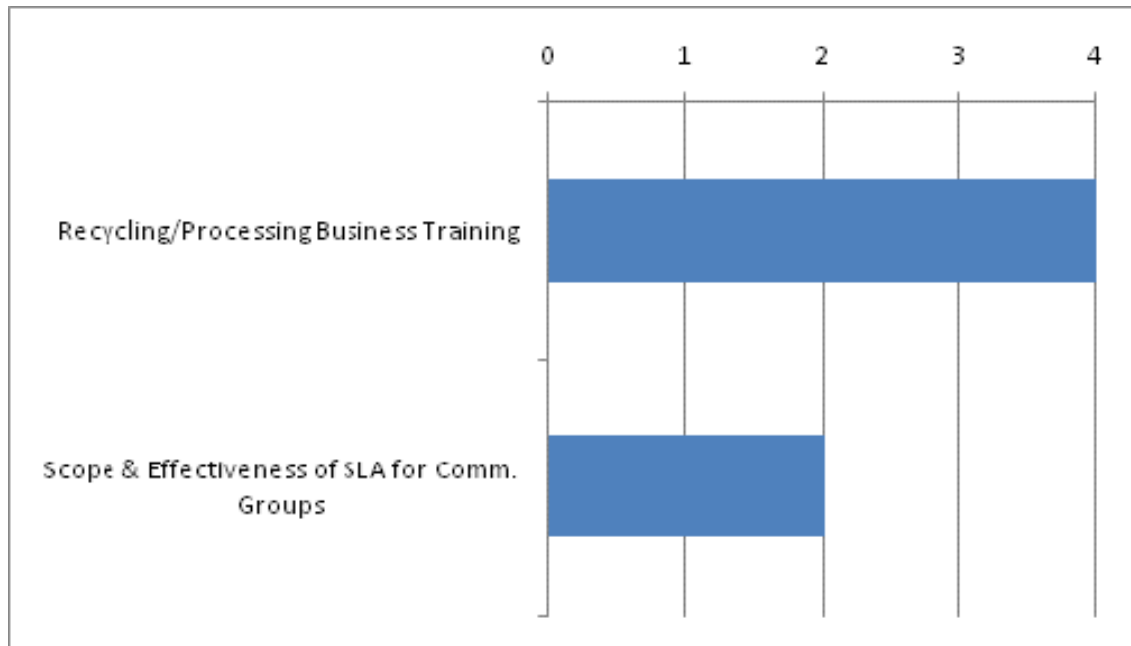


Figure 10 Number of Councils identifying research and support for the community sector

Recycling and Reprocessing Orientated Business Training

Five Councils noted that although there was a widespread reliance on the community sector to provide recycling solutions for niche materials, they were concerned that these solutions may not be commercially sustainable, as community groups tended to rely on grants to support their operations. Some of these Councils were also concerned about the level of business skill demonstrated by these organisations. The Councils would be interested in seeing community organisations have access to waste processing business orientated training/capacity building.

Angus, East Lothian, Inverclyde and Renfrewshire Councils were interested in this type of support.

Notwithstanding this, Inverclyde and Renfrewshire were also interested in learning about what materials community groups were recycling in other Councils and what outlets they used.

Evaluation of the Scope & Effectiveness of Service Level Agreements for Community Groups

Angus and Orkney Councils expressed an interested in understanding whether contracts/service level agreements could help the third sector/community groups contribute to Councils' recycling performance.

Angus Council was considering trialling SLAs with community groups in their area.

Summary of Research and Support

Table 8, summarises the research and support needs that Councils identified as being useful to help the community sector make a greater contribution to their

waste management targets. The table includes details of their understanding of existing provision and using a quick reference traffic light system, details overall availability. The table also details the type of support and format that they would find valuable.

| Topic | Existing Provision (as identified by Councils) | Research/Support Required (as identified by Councils) |
|---------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------|
| Recycling and reprocessing orientated business training | | ● (recycling/reprocessing centred) training |
| Scope & effectiveness of SLA for community groups | | ● Report. |

Table 8 Summary of "Community Sector" research and support Councils identified as being valuable.

Key for the traffic light system:

- = green, available to some extent,
- = yellow, limited availability
- = red, not available

4.9. Recycling Centres

Three Councils identified 2 support topics under the broad theme of Recycling Centres (Figure 11).

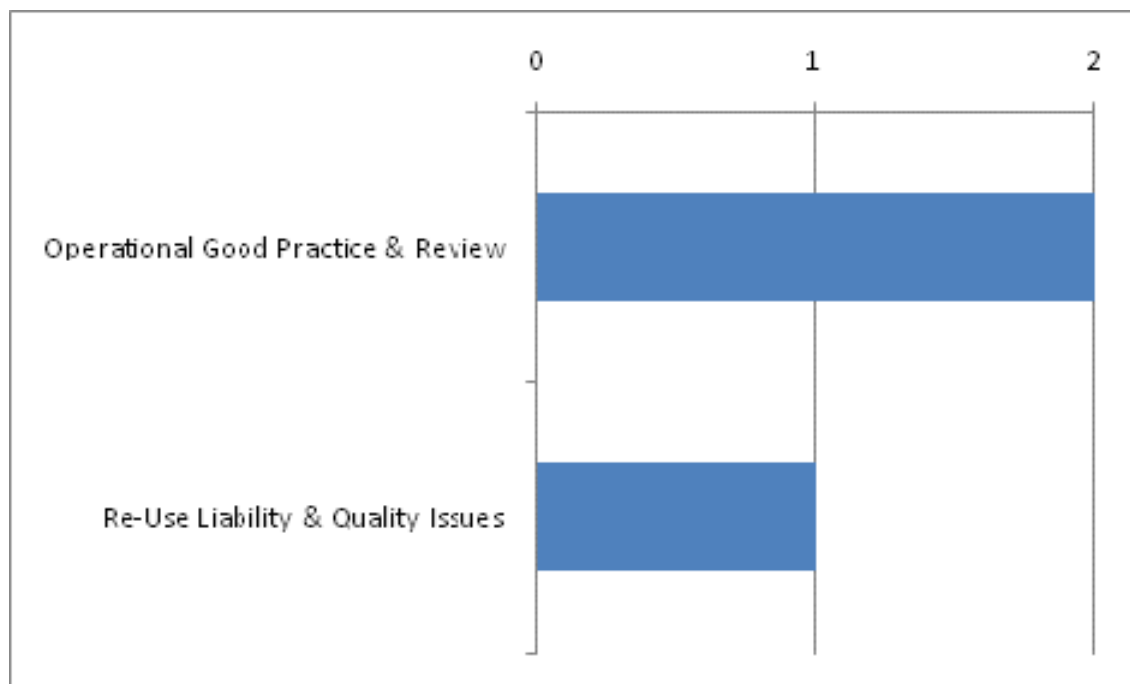


Figure 11 Number of Councils identifying research and support needs around recycling centres

Operational Review & Good Practice Information

Scottish Borders and Inverclyde Councils were interested in support to review operational procedures at their Recycling Centres, primarily to identify opportunities to increasing recycling performance.

Scottish Borders Council noted that case studies detailing operational arrangements of high/low performing Recycling Centres were useful. They noted that they felt that the NACAS report was somewhat out of date.

Re-Use Liability & Quality Issues

West Lothian Council was interested in promoting re-use of some materials/items collected through its Recycling Centres and bulky uplift service, and wanted to develop a better understanding of associated liability and quality issues.

Summary of Research and Support

Table 9, summarises the research and support needs that Councils identified around recycling centres. The table includes details of their understanding of existing provision and using a quick reference traffic light system, details overall availability. The table also detail the type of support and format that they would find valuable.

| Topic | Existing Provision (as identified by Councils) | Research/Support Required (as identified by Councils) |
|-----------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------|
| Operational Review & Good Practice Information | NACAS report (but somewhat out of date) | ● Technical assistance and good practice information |
| Re-Use Liability & Quality Issues | | ● |

Table 9 Summary of "Recycling Centres" research and support Councils identified as being valuable.

Key for the traffic light system:

- = green, available to some extent,
- = yellow, limited availability
- = red, not available

4.10. Other Topics

14 Councils identified an additional 7 areas where research and support would be valuable, but which could not readily be classified into any of the 9 previous categories. These are illustrated by Figure 12.

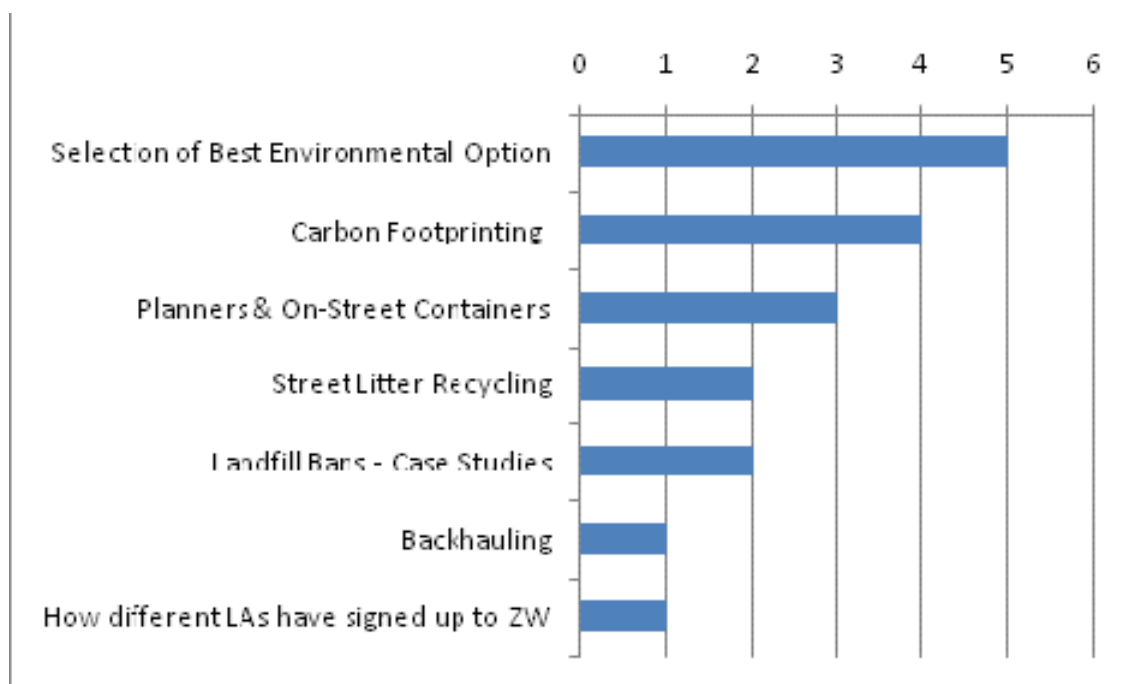


Figure 12 Number of Councils identifying other research and support areas

Selection of Best Environmental Option

Five Councils (including three of the island Authorities) were concerned that it appeared that the selection of service and treatment options did not appear to take into consideration what was most suited to local circumstances, primarily in terms environmental impacts, but also financial considerations.

Two mainland authorities also noted that some of the tools readily available (e.g. WRATE or KAT) were not sufficiently detailed or flexible to enable them to fully model their specific service requirements.

Councils interested in this type of support included: Aberdeenshire, Orkney, Shetland, West Lothian and Western Isles.

These five Councils were interested in information/research that could help them identify the service options that were environmentally most suited to their particular circumstances. More flexible modelling tools and support were also identified as being of interest.

Carbon Footprinting Support & Training

Orkney, Shetland and Stirling Councils expressed an interest in receiving support calculating the carbon footprint of their waste management services. Renfrewshire saw merit in training staff on Carbon accounting/footprinting techniques. Both of these topics have close links with the previous research/support need.

Planners & On-Street Containers

Edinburgh, Glasgow and West Lothian were also concerned that although local planners recognise the need for making provision for regional waste treatment infrastructure, this recognition has not materialised at a street-level and two specific issues were identified: lack of storage space for recycling/waste containers in new developments and opposition to on-street refuse/recycling containers.

These Councils were interested in guidance (similar to SPP10) that would require planners to recognise these issues and address them at the appropriate level.

Street Litter Recycling

To further drive their recycling performance, and explore all options available, two Councils were interested in evaluating the opportunities for recovering recyclates from street litter/street cleansing waste. [Glasgow and North Ayrshire]

They were interested in understanding approaches to collection (e.g. would different containers be required?), segregation equipment, as well as recyclate quality and value.

Landfill Bans

To drive recycling in their area and provide wider environmental leadership, Fife and Moray Councils with their own landfills are considering introducing landfill bans for certain waste streams. Where these landfills are the only disposal option, such an approach could have wider benefits, as it would force private sector contractors to offer their clients access to recycling services. The Councils would be interested in knowing if this type of approach has worked elsewhere, and to engender Elected Member support, what the likely impact was on local businesses so far.

Backhauling Opportunities

Clackmannanshire Council was interested in reducing the costs and environmental impact from hauling recyclates by exploring opportunities for backhauling. Although the Council has identified potential partners and worked with a university to develop a research project, nothing has come to fruition.

How Different Councils have Signed up to Zero Waste

Midlothian Council was interested in learning how colleagues have signed up to Zero Waste (e.g. they were aware that one Authority had made a formal commitment to Zero Waste to Landfill, whilst they had a Zero Waste Statement).

Summary of Research and Support

Table 10 summarises other topics where research and support was identified by Councils as potentially useful. The table includes details of their understanding of existing provision and using a quick reference traffic light system, details overall availability. The table also details the type of support and format that they would find valuable.

| Topic | Existing Provision (as identified by Councils) | | Research/Support Required (as identified by Councils) |
|------------------------------------------------------------|--------------------------------------------------------|---|-----------------------------------------------------------------------------------------------------------------------|
| Selection of Best Environmental Options | SEPA's WRATE & WRAP's KAT tools | ● | Benchmarking/background research and information on environmental performance. More flexible modelling tools/support. |
| Carbon Footprinting | | ● | Technical support/training for waste service and operations. |
| Planners & On-Street Containers | | ● | Planning guidance, akin to SPP10, but with an emphasis on on-street containerisation. |
| Street Litter Recycling | | ● | General information and assessment of potential. |
| Landfill Bans | | ● | Research on effectiveness and impact on local businesses. |
| Backhauling Opportunities | | ● | Research |
| How Different Councils have Signed up to Zero Waste | Informal discussions with members of COSLA WM Network. | ● | Review of different approaches. |

Table 10 Summary of other topics where Councils felt additional research and support would be valuable. .

Key for the traffic light system:

- = green, available to some extent,
- = yellow, limited availability
- = red, not available

4.11. Accessing Research & Support Information

Integral to this evaluation was an assessment of the preferred methods for making any research or support resulting from this work available to Councils. During the interviews the following means of providing access to research and support became apparent:

1. An online one stop portal ('virtual library') with password protected access, acting as a repository of technical information that is kept up to date and has managed content, but also scope for users to add/identify additional content (e.g. reports, links). Organised by topic area, the site could include:
 - a. Technical reports; Case studies; Factsheets
 - b. Signposting
 - c. Blogs & Discussion Forums
 - d. Webinars (Internet based seminars)
 - e. Video Podcasts
2. Targeted Technical Assistance/Support
3. Job shadowing – to learn from other Council's experience
4. Technical visits

One point made about using an online portal was that it could be used as a forum for improving communication within COSLA members and between COSLA members and the Scottish Government and SEPA.

Although existing sources of research and information were identified for some of the topics, knowledge of these was generally not widespread and typically confined to a small number of Councils.

Of those Councils that were aware of existing research and information, its use was reported as limited for a variety of reasons: e.g. too disperse, difficult to access due to different accessibility protocols, not in a relevant format, set within a different context (e.g. country) or out of date.

One exception to this was that around the provision of information, research and support around "Education, Awareness & Public Support", where the general consensus was not about limited use, but rather sufficient availability: i.e. Councils wanted access to more support around this topic.

4.12. Prioritising Research & Support

The LARS Steering Group met on the 21st April 2009 to review the findings from the needs assessment and prioritise research and support topics. The Steering Group agreed to focus the provision of research and support on the top three topics, indicated by Figure 13.

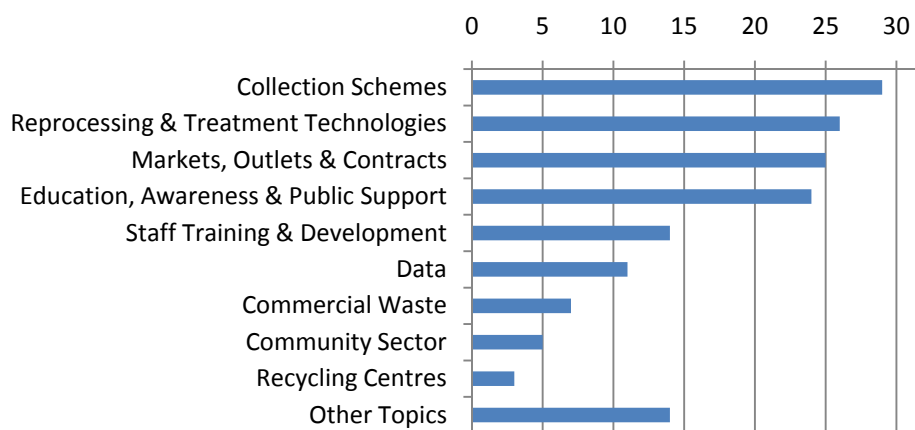


Figure 13 Number of Councils identifying research and support topics within each theme.

To facilitate the prioritisation the Steering Group also noted whether individual research, support and information needs within each of the three most popular topics contributed to the attainment of national waste management targets, carbon savings, operational efficiencies, economic development and innovation. A nominal weighted score was also produced for each of these five categories:

- 50 for national waste management targets
- 20 for carbon savings
- 10 for operational efficiencies
- 10 for economic development
- 10 for innovation

The specific contribution from individual research, support and support needs within the top three topics to these categories is detailed in Appendix B.

To prioritise information and support topics these scores were multiplied together and by the number of authorities that identified each particular topic. As an example:

$$\text{Priority Score} = (50 \times 20 \times 10 \times 10 \times 10 \times \text{LA}) / 1000$$

This scoring system generated a priority list based on score, provided below as Table 11, which the Steering Group agreed should guide the next steps in the delivery of the required research, support and information needs.

| Research, Support and Information Needs | Score |
|----------------------------------------------------------|---------------|
| Technologies - Generic Information | 17,000 |
| Development of Local/Alternative Outlets | 14,000 |
| Generic Information for Collection Schemes | 2,000 |
| Local Authority Partnerships – Governance Arrangements | 500 |
| Details of what Materials other LAs are Collecting | 140 |
| Outlets used by other LAs | 140 |
| Bulky Uplift Recycling | 100 |
| Collection Scheme Appraisal - Modelling Support | 90 |
| Kerbside Optimisation Support | 60 |
| Information on the Location of Waste Treatment Capacity | 40 |
| Collections from High Density Properties – Good Practice | 30 |
| List of Approved Technologies | 25 |

Table 11 Score based priority research, support and information priority list

5. Next Steps

The next step in the LARS programme is the development of a phased Action Plan to outline the delivery of the research, support and information needs identified through the prioritisation exercise.

The initial step (the development of the Action Plan) is for Remade Scotland, WAS & WRAP to explore the development of a 'Virtual Library'. Once the concept has been proven, the 'Virtual Library' will be expanded to include a wider range of research, support and information needs. An important aspect of the 'Virtual Library' will be that any documents and links are verified and validated.

However, the Steering Group also noted that some Councils felt that the most effective method of support would include direct support from the Zero Waste Scotland Partners, e.g. assistance in evaluating new schemes such as for Food Waste Collection.

The Action Plan will therefore also include a programme of activities to address the information and support needs, identifying where the Zero Waste Scotland partners will be able to support Local Authorities directly and where additional government support is required.

6. Non-Research Issues

In addition to the research and support topics identified in Section 4, 25 Councils identified an additional 17 non-research issues, illustrated by Figure 14, which they would like noted as impact on their ability to achieve waste management recycling and diversion targets.

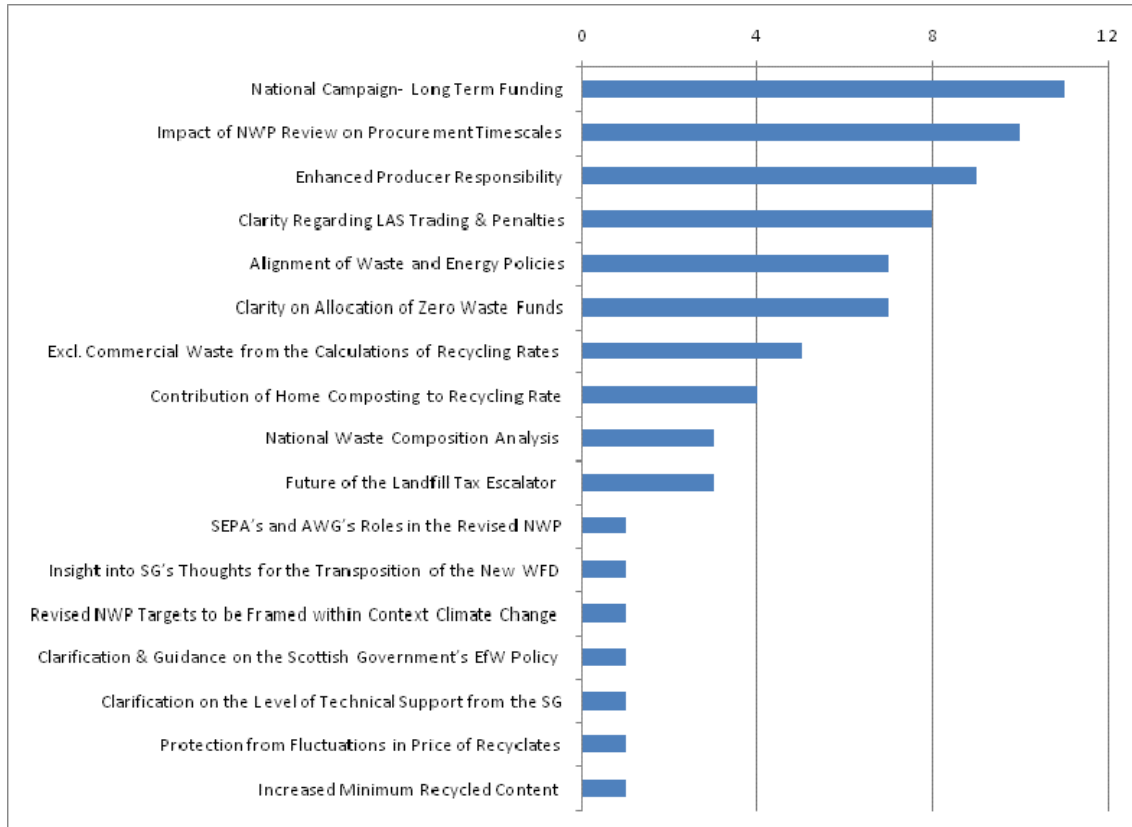


Figure 14 Number of Councils identifying other non-research issues felt to impact their ability to achieve waste management recycling and diversion targets.

National Campaign- Long Term Funding

Eleven Councils expressed concern that long-term funding arrangements for the national recycling awareness campaign did not appear to be in place. Several noted that it would be useful if the national campaign could link/support local campaigns (including on waste minimisation).

Long-term funding for a national recycling awareness campaign was raised as an issue by Aberdeenshire, Angus, Dumfries & Galloway, East Dunbartonshire, Fife, Highland, Midlothian, Moray, North Lanarkshire, South Ayrshire and South Lanarkshire.

Impact of National Waste Plan (NWP) Review on Procurement Timescales

Ten Councils expressed concerns about the timescales/duration of the review of the National Waste Plan and would welcome a preview to understand the broad direction/range of initiatives that the Scottish Government is considering.

It was also noted that the current review timescales are unlikely to give Councils sufficient time to procure and commission new infrastructure.

Concerns were also expressed about the impact this may have in ensuring continuity in national waste policy. Councils raising this point included: Angus; Dumfries & Galloway; Dundee; East Ayrshire; Falkirk; Fife; Glasgow; Moray; Perth & Kinross and West Lothian.

Enhanced Producer Responsibility

Nine Councils felt that there should be enhanced producer responsibility for many of the waste streams they collect.

They felt that more emphasis should be placed on brand owners and retailers to encourage them to minimise packaging and support recycling by contributing to collection arrangements, as is currently done for WEEE. Councils interested in enhanced producer responsibility included: Clackmannanshire; East Ayrshire; East Renfrewshire; Edinburgh; Falkirk; Fife; North Lanarkshire; Shetland and South Ayrshire.

Clarity Regarding LAS Trading & Penalties

Eight Councils expressed concern about the lack of clarity regarding LAS penalties and trading schemes. Amongst these Authorities there was a wide range of positions, which included assuming that they would/would not be able to trade allowances and that penalties would/would not be applied. In some cases, clarity on these issues could release funds, currently held as contingency for LAS penalties, for service development/enhancement. Councils seeking clarity on LAS included: Dumfries & Galloway; Edinburgh; East Lothian; Glasgow; Perth & Kinross; North Lanarkshire; Scottish Borders and South Ayrshire.

Alignment of Waste and Energy Policies

Several Councils consider that technologies that convert waste to energy offer the best solution for meeting their recycling and landfill diversion targets and therefore there needs to be better alignment between these two policy areas.

In particular, some were concerned about the apparent limited recognition of the contribution that this type of technologies can make to reducing greenhouse gas emissions and the timescales involved in connecting to the national grid. These issues impact on their ability to justify investment in these technologies.

The Scottish Government's 25% limit on EfW facilities does not appear to be well understood by Local Authorities, particularly as it appears difficult to justify in terms

of environmental benefit (i.e. avoided greenhouse gas emissions) or diversification of energy supply.

Better alignment of these policies would improve Councils' ability to justify investment in appropriate waste treatment infrastructure.

The following Councils noted this as an area of concern where further clarification/work would be beneficial included: Aberdeen, Angus, Falkirk, Fife, North Lanarkshire, South Lanarkshire and Shetland.

Clarity on Allocation of Zero Waste Funds

Seven Councils said that they would find information on the Zero Waste Fund, including award and allocation criteria, useful. However, this was to a certain extent superseded by the Scottish Government's announcement on 18th December 2008. Councils making this point included: Dumfries & Galloway; Dundee; East Ayrshire; East Dunbartonshire; Falkirk; Fife and South Ayrshire.

Exclude Commercial Waste from the Calculations of Recycling Rates

As recent SWF support for recycling services and infrastructure was directed exclusively at domestic waste, five Councils were interested in decoupling commercial waste from the calculation of their recycling performance.

North Lanarkshire Council noted that in the past Audit Scotland reported domestic and commercial waste separately.

Five Councils also raised concerns about the fairness of including commercial waste in the calculation of an authority's recycling performance, particularly as different authorities collect proportionally different amounts of commercial waste. The Councils raising this issue were: East Dunbartonshire; East Lothian; East Renfrewshire; North Lanarkshire and West Lothian.

Contribution to Recycling Rate from Home Composting

Four Councils, who invested in home composters as a means for minimising the amount of waste collected and offering residents a more localised solution for compostable waste, wanted organic waste diverted through home composting to contribute to the calculation of an Authority's recycling rate, although it was noted that the issue is being considered by WRAP and DEFRA. The four Councils were: Dumfries & Galloway; Dundee; East Lothian and Orkney.

National Waste Composition Analysis

Aberdeen City, East Lothian and Glasgow City Councils said they would be supportive of a national waste composition analysis, although one felt that it should not be necessary to have all Councils conduct one each year, but rather spread it by family group (e.g. COSLA's family groups).

Future of the Landfill Tax Escalator

Glasgow City, East Dunbartonshire and W. Isles Councils would welcome an insight into the future plans for the landfill tax escalator, as it has the potential for impacting the business case for any new treatment facilities.

SEPA's and AWG's Roles in the Revised National Waste Plan (NWP)

Glasgow City Council would welcome clarification on the future role of SEPA and AWG in the revised NWP in helping achieve the national recycling and diversion targets.

Risk that Revised NWP May Overlook Provision for Certain Waste Streams

Another Council was concerned that with responsibility for the NWP being transferred to the Scottish Government and on-the-ground delivery devolved to Councils, there was a risk that treatment capacity for some waste streams could potentially be overlooked. [West Lothian]

Insight into Scottish Government's Thoughts for the Transposition of the New WFD

South Lanarkshire Council said they would welcome an insight into the Scottish Government's thoughts on how they might transpose the new Waste Framework Directive. They would also welcome clarification of Scottish Government's interpretation of the Landfill Directive's pre-treatment clause, and whether it may change from the current interpretation, which considers compaction in an RCV as pre-treatment, towards one that requires more involved treatment, e.g. to reduce biodegradability.

Revised National Waste Plan Targets to be Framed within Context Climate Change

Highland Council hoped that targets in the revised NWP will be framed within the context of climate change and reducing greenhouse gases.

Clarification & Guidance on the Scottish Government's EfW Policy

South Lanarkshire Council said it would welcome more concrete guidance on the Scottish Government's policy for EfW.

Clarification on the Level of Technical Support from the Scottish Government

West Lothian Council said that they would welcome a clearer indication of the level of support they available from the Scottish Government, either directly or through WRAP, WAS and Remade.

Protection from Fluctuations in Price of Recyclates

Dundee City Council thought that there should be a mechanism for intervening and protecting Councils from fluctuations in the price paid for recyclates.

Increased Minimum Recycled Content

South Lanarkshire Council would like to see greater emphasis being placed on specifying minimum recycled content (by the Scottish and UK Governments) for products/good placed in the market place to support the market for recyclates local authorities collect.

7. Appendix A – Interview Dates

| Council | Interview Date |
|-----------------------------|-------------------|
| Aberdeen City Council | 18/11/2008 |
| Aberdeenshire Council | 14/11/2008 |
| Angus Council | 2/12/2008 |
| Argyll & Bute Council | 8/9/2008 |
| Clackmannanshire Council | 28/11 & 5/12/2008 |
| Dumfries & Galloway Council | 25/11/2008 |
| Dundee City Council | 11/9/2008 |
| East Ayrshire Council | 27/11/2008 |
| East Dunbartonshire Council | 7/11/2008 |
| East Lothian Council | 21/11/2008 |
| East Renfrewshire Council | 13/11/2008 |
| City of Edinburgh Council | 21/11/2008 |
| Falkirk Council | 6/11/2008 |
| Fife Council | 10/11/2008 |
| Glasgow City Council | 17/11/2008 |
| Highland Council | 12/9/2008 |
| Inverclyde Council | 9/9/2008 |
| Midlothian Council | 16/12/2008 |
| Moray Council | 19/11/2008 |
| North Ayrshire Council | 10/9/2008 |
| North Lanarkshire Council | 2/12/2008 |
| Orkney Islands Council | 12/11/2008 |
| Perth & Kinross Council | 17/11/2008 |
| Renfrewshire Council | 9/9/2008 |
| Scottish Borders Council | 18/12/2008 |
| Shetlands Islands Councils | 11/11/2008 |
| South Ayrshire Council | 20/11/2008 |
| South Lanarkshire Council | 1/12/2008 |
| Stirling Council | 20/11/2008 |
| West Dunbartonshire Council | 12/9/2008 |
| West Lothian Council | 26/11/2008 |
| Western Isles Council | 12/01/2009 |

8. Appendix B – Prioritisation

Priority Ranking for Collection Schemes

| Topic | Existing Provision (as id by LAs) | Research/Support Req. (as id by LAs) | Targets | Carbon Savings | Efficiencies | Economic Development | Innovation | No. LAs | Score | Rank |
|--------------------------------------------------------------------------|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------|----------------|--------------|----------------------|------------|---------|----------|------|
| Generic Information for Collection Schemes | Some info. from APSE, SEPA, WRAP, WAS, Remade Scotland, AskJennie & LARAC forum. | Case studies, benchmarking data and technical support (e.g. for options appraisal). | 50 | 20 | 10 | 10 | 1 | 20 | 2,000.00 | 1 |
| Details of what Materials other LAs are Collecting | SEPA & informally from COSLA | WDF training | 50 | 20 | 10 | 1 | 1 | 14 | 140.00 | 2 |
| Bulky Uplift Recycling | | Case studies & good practice information. | 50 | 20 | 10 | 1 | 10 | 1 | 100.00 | 3 |
| Collection Scheme Appraisal - Modelling Support | WRAP KAT toolkit | Modelling tool & direct modelling support. | 50 | 20 | 10 | 1 | 1 | 9 | 90.00 | 4 |
| Kerbside Optimisation Support | | Guidance, technical support and training. | 50 | 20 | 10 | 1 | 1 | 6 | 60.00 | 5 |
| Collections from High Density Properties – Good Practice | | Good practice guidance for recycling in high density residential areas. | 50 | 20 | 10 | 1 | 1 | 3 | 30.00 | 6 |
| Information for Elected Members and Public | | Case studies, podcasts & opinion surveys. | 50 | 1 | 10 | 1 | 1 | 6 | 3.00 | 7 |
| GPS & Route Planning Software – Exploring Opportunities for Efficiencies | Supplier information. | Review of available systems, solutions and applications. | 1 | 20 | 10 | 1 | 10 | 1 | 2.00 | 8 |
| Public Justification of Container Tagging – Potential Approaches | Supplier information. | Case studies & good practice information. | 50 | 1 | 10 | 1 | 1 | 2 | 1.00 | 9 |
| Participation – Standardised Methodology for Calculation | WRAP & Remade | Standardised methodology for all collection schemes. | 50 | 1 | 10 | 1 | 1 | 1 | 0.50 | 10 |
| Health & Safety Implications of new Collections | HSE has some reports | Reports/reviews for new collection schemes (e.g. food waste). | 1 | 1 | 10 | 1 | 1 | 1 | 0.01 | 10 |



Priority Ranking for Reprocessing & Treatment Technologies

| Topic | Existing Provision (as id by LAs) | Research/Support Req. (as id by LAs) | Targets | Carbon Savings | Efficiencies | Economic Development | Innovation | No. LAs | Score | Rank |
|-----------------------------------------------------------|-------------------------------------------------------------------------|----------------------------------------------------------|---------|----------------|--------------|----------------------|------------|---------|-----------|------|
| Technologies - Generic Information | Some available through DEFRA's WIP and supplier websites | Case studies & technology overview. Modelling support | 50 | 20 | 10 | 10 | 10 | 17 | 17,000.00 | 1 |
| List of Approved Technologies | Not available | | 50 | 20 | 10 | 10 | 10 | 5 | 25.00 | 3 |
| Contractual Arrangements & Delivery Models | Not available in one location, although WRAP have some model contracts. | Case studies | 50 | 1 | 10 | 10 | 1 | 5 | 25.00 | 4 |
| Commercial Arrangements for Distributing District Heating | Not available. | Report | 50 | 1 | 10 | 10 | 1 | 2 | 10.00 | 6 |
| LA EFW Forum | | Facilitated forum | 50 | 1 | 10 | 1 | 10 | 2 | 10.00 | 6 |

Priority Ranking for Markets, Outlets & Contracts

| Topic | Existing Provision (as id by LAs) | Research/Support Req. (as id by LAs) | Targets | Carbon Savings | Efficiencies | Economic Development | Innovation | No. LAs | Score | Rank |
|---------------------------------------------------------|----------------------------------------------|-------------------------------------------------------------------------------------------------|---------|----------------|--------------|----------------------|------------|---------|-----------|------|
| Development of Local/Alternative Outlets | WRAP, Remade, Scottish Enterprise | | 50 | 20 | 10 | 10 | 10 | 14 | 14,000.00 | 1 |
| Local Authority Partnerships – Governance Arrangements | | Case studies, factsheets or report outlining partnership/joint working arrangements | 50 | 20 | 10 | 1 | 10 | 5 | 500.00 | 2 |
| Outlets used by other LAs | WDF, Remade, WRAP, LA colleagues & askjennie | Fact-sheets/Case studies and WDF training. | 50 | 20 | 10 | 1 | 1 | 14 | 140.00 | 3 |
| Information on the Location of Waste Treatment Capacity | | Location map/list of treatment facilities and available capacity. | 50 | 20 | 10 | 1 | 1 | 4 | 40.00 | 4 |
| Collaborative Selling (3 Options) | | Research into barriers and opportunities. Facilitated discussions to help overcome concerns. | 1 | 1 | 10 | 1 | 10 | 10 | 1.00 | 5 |
| Recyclate Pricing Information | WRAP, Remade, Commodity Indexes | Research reports and signposting to indices. | 1 | 1 | 10 | 10 | 1 | 2 | 0.20 | 6 |



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