

# Recycling Scheme Optimisation Proposal

Submitted to COSLA

June 2009



Contract Reference: Recycling Scheme Optimisation Proposal

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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.

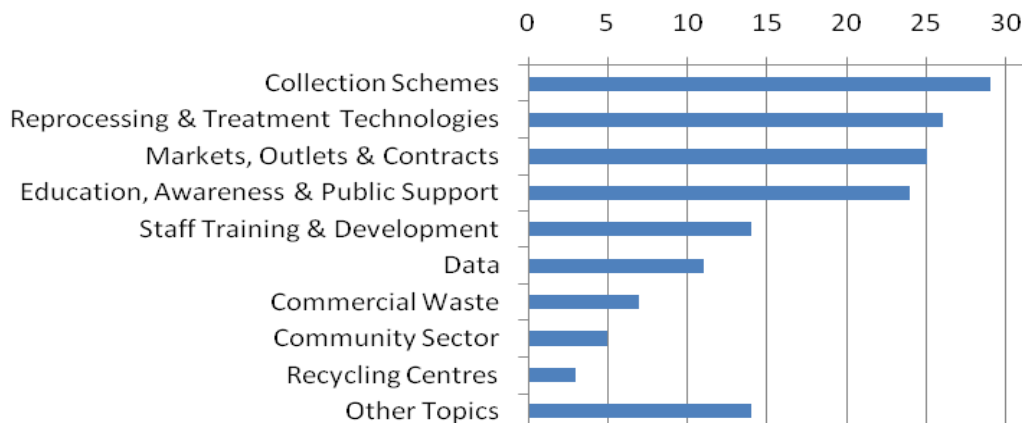
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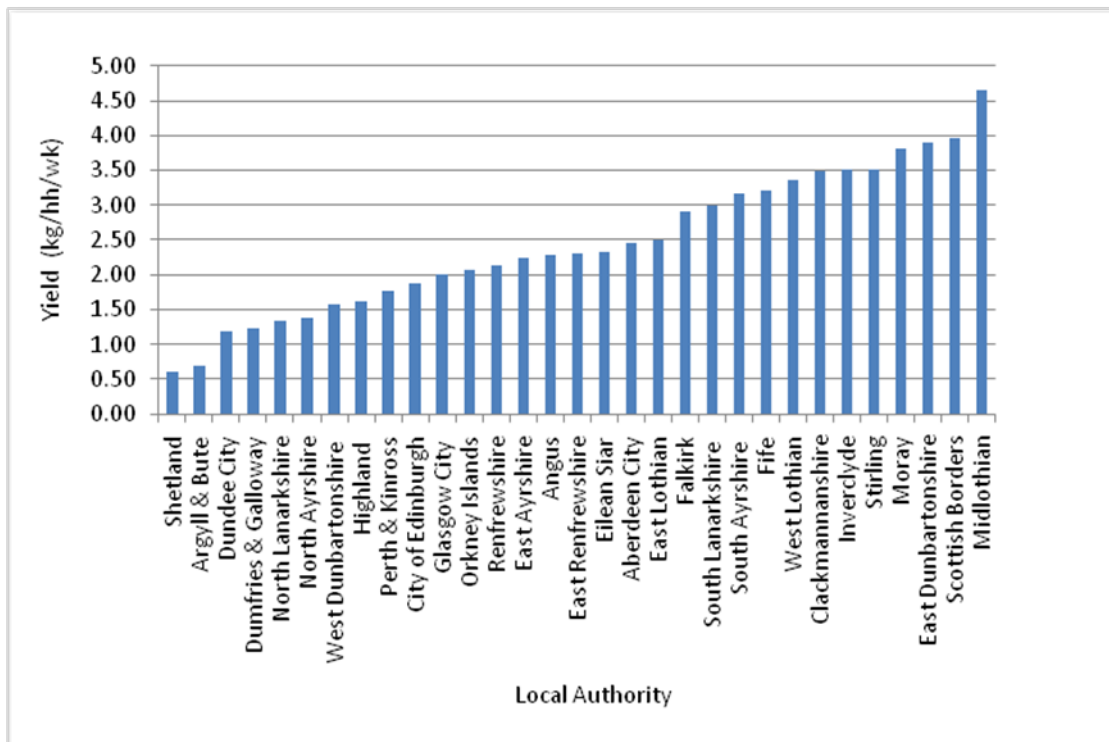
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# 1 Background

Following the announcement in January 2008 from Rural Affairs and Environment Minister Richard Lochhead, outlining ambitions for a Zero Waste Scotland, local authorities are under increasing pressure to deliver on challenging recycling targets. Research carried out for the Remade Local Authority Research and Support (LARS) Programme in 2008/9 identified and prioritised the support needed by Councils to assist them in enhancing recycle collection services.



In addition, research carried out as part of the Remade Recyclate Recovery Study in 2008/9 indicates significant variation in scheme performance across Councils. Other research has also indicated how recycling performance can vary within individual recycling schemes.



The contribution improving existing recycling activities can make to increased recycling rates is therefore well understood and has been highlighted as an important part of the work Remade Scotland will undertake in 2009/10.

The objective of the Recycling Scheme Optimisation programme is therefore to assist Councils achieve higher recovery rates through targeted support, working directly with each local authority. Remade Scotland propose to continue to work with COSLA through a Local Authority Steering Group to deliver a targeted programme to assist Councils optimise their recycling schemes.

## 2 Aims

The programme will involve discussions with each of the Councils on their objectives and needs, and will provide a template for the data requirements for the support the Council needs. The data gathered from the Councils will allow Remade to carry out one or more of the following:

- **Review the current kerbside dry recyclate collection service** – Across each of the council’s existing recycling schemes, a programme of support data requirements will be defined. The information required may relate to:
  - *Operational Data* - describing how many households are on each daily route, the housing type, and general indicators of social demographic significance;
  - *Input performance* – data describing how well the public engages with the council’s recycling scheme, including participation or set-out rate,
  - *Output performance* – analysis of tonnage captured through each daily route to determine kg/hh/wk by daily route and across the council area.
- **Identification of areas of potential enhancement** – For existing services and in relation to identified low performing daily routes Remade, together with Waste Aware Scotland and the Council, will identify areas for enhancing recycling services and define a targeted programme of enhancement to include improved messaging and the production/distribution of targeted leaflets/information. Remade would engage with both the Council and WAS to define the targeted programme which may include door to door messaging or a survey on service improvement which would also serve as a reminder to the householder on how to engage with the service;
- **Examination of the opportunities where additional or new and innovative services can be introduced** - The opportunities for direct performance improvements and enhancements to the existing services (e.g. adding extra materials, altering frequency, expanding the households included) will be evaluated to estimate their impact on recycling rates. The identification and evaluation of opportunities to add new services (e.g. food waste, segregation / processing of bulky uplifts, kerbside collection of glass vs. recycling point services) may also be carried out;



- **Assessment of carbon savings** – For local authorities with an in-depth understanding of their optimisation requirements an alternative package of work can be offered where carbon savings of a specific scheme will be calculated with regards to tonnage diverted from landfill versus the carbon costs of collection and haulage. This will be especially useful for Councils wishing to promote the benefits of existing schemes and the added value of increased performance within the scheme.

Remade proposes working with WAS and WRAP to assist councils with the enhancements to recycle recovery programmes. However the exact programme and methodology will vary from Council to Council depending on

- the existing services in place;
- each Council's particular needs and;
- the availability of good quality data on day routes, set out rates, participation etc.

In discussion with Waste Aware Scotland, Remade Scotland anticipates working with WAS Recycling Advisors to support certain elements of data collections (i.e. potentially on door to door surveys or set out rates).

### 3 Activities

Based on prior established knowledge and experience of working with Councils on service optimisation, standard outline methodologies have been developed. Options from this structured approach will be made available to all 32 Councils.

Due to the amount of time available in the programme Councils will not be able to benefit from all elements of the scheme optimisation processes. It is also recognised that some Councils may already have a good understanding of performance within their recycling schemes and hence do not require assistance with regards to baseline analysis. In contrast, other Councils may find themselves in the position of being unable to proceed with analysis due to data gaps or incomplete data storage systems.

With this in mind Remade proposes to offer individual packages of work to best suit the Council's specific knowledge or data gap and immediate needs. The project is designed to be flexible to allow Councils to develop knowledge or systems in one specific area of their recycle recovery programme. The methodologies in the work carried out may also act as guidelines for any future optimisation processes within the Council.

Six specific packages of work have been designed to represent a wide range of Councils' needs. Each package consists of five days of direct Council support once relevant data has been acquired by Remade. It is envisaged that, in some cases, Remade project team members may need to visit Councils in person in order to source the correct required data.

Most packages of work will involve some form of data analysis. Where applicable a brief summary report will be produced containing information on findings and possible next steps.



Councils may opt for a package of work relating to data infrastructure whereby data may be prepared for future analysis (e.g. matching day routes to vehicles) or systems may be put in place to facilitate better understanding of household/route performance (e.g. the inception of a database of households and waste route information). In such cases the package of work would not include a report.

Should any Council choose not to take part in the programme, 'spare' packages of work could be offered to Councils as agreed with COSLA and the Scottish Government to be in most need of further support.

Package of work	Description of work	Days of direct support
<b>Data Preparation</b>	<ul style="list-style-type: none"> <li>e.g. The matching of vehicles to day routes</li> <li>e.g. The assessment of no. of flatted properties</li> </ul>	5
<b>Database Facilitation</b>	<ul style="list-style-type: none"> <li>Inception of database containing waste and recycling route information plus any other relevant info (e.g. property type, Council Tax Band, Postcode, SIMD) for individual properties</li> </ul>	5
<b>Existing scheme performance/areas to target</b>	<ul style="list-style-type: none"> <li>Assessment of performance within scheme in terms of kg/hh/wk</li> <li>Identification of areas of potential enhancement</li> <li>Should participation data become available this will be included in the analysis</li> <li>Should time allow, a brief analysis of area SIMD characteristics may be included</li> <li>Report</li> </ul>	5
<b>Assessment of intervention</b>	<ul style="list-style-type: none"> <li>Set-out survey of <b>one</b> day route (this includes preparation of survey spreadsheet, booklet and map)</li> <li>Intervention to be carried out by WAS in chosen day route</li> <li>Set-out survey of day route after intervention</li> <li>Report</li> </ul>	5
<b>Assessment of potential service additions/enhancements</b>	<ul style="list-style-type: none"> <li>Analysis of scheme tonnage data</li> <li>Assessment of projected tonnages following proposed service changes (to be agreed with LA)</li> <li>Report</li> </ul>	5
<b>Carbon assessment</b>	<ul style="list-style-type: none"> <li>Assessment of overall carbon savings, balancing landfill diversion savings with vehicle/haulage costs (one scheme only)</li> <li>Report</li> </ul>	5



Alternative or amended packages of work may be available depending on the needs of individual Councils. These would be agreed before commencement and would not exceed five days of direct support.

## 4 Project Planning

Due to the varied nature of the project it is not possible to plan an exact timeline. However, following an initial approach by Remade, Councils would be expected to confirm their specific work requirements as soon as possible. This should be followed by relevant data requests by Remade to Councils before the packages of work can begin.

The programme for each Council would be expected to proceed as follows:

1. Initial contact with Council by Remade to discuss any support requirements
2. Agreement between Remade and Council on package of work (this may include discussion with WAS and/or WRAP regarding partnership working)
3. Submission of data request from Remade to Council (this may involve an on-site visit to Councils by Remade project team member)
4. Completion of up to five days of support, including a report if applicable – according to the agreed package of work, this may not be carried out in consecutive days. (Days spent on report writing will be considered part of the five day package, however, any involvement from WAS or WRAP would not be counted as part of the five days and is subject to their respective availability and programme resources).

