

# Developing the Evidence Base for Plastics Recycling in Scotland

## Appendices

**A detailed review of the current position of plastic recycling in Scotland, based on analysis of tonnage arisings, the established infrastructure for managing waste plastics and estimating current and future plastics recycling by type and source**

**Project Code:** IFM002-001

**Research date:** October 2011 to January 2012 **Date:** April 2012

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Written by: Iain Weir, John Taylor and Hayley Welsh

Optimat Ltd



*Optimat Limited has made all reasonable attempts, within the scope and resources available to the project, to ensure the data in this report are accurate. Estimations of the plastic waste arisings and recycling rates in Scotland are based on published sources which have been fully referenced in this report. As such, the accuracy of the data contained within this report is reliant on this referenced information. Optimat Limited does not therefore accept any liability which may arise through the use of the content of this report.*

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## Appendix A – Sources of Data, Assumptions and Limitations

### 1. Structure of the Arisings Model

The project brief requires that the best available evidence is used to identify the quantity and type of plastics entering the waste stream. This information was to be estimated at a Local Authority level.

An initial review of available data sources concluded that the following sources of waste plastic arisings be considered:

- Household
- Commercial & Industrial (C&I)
- Construction & demolition (C&D)
- Agriculture

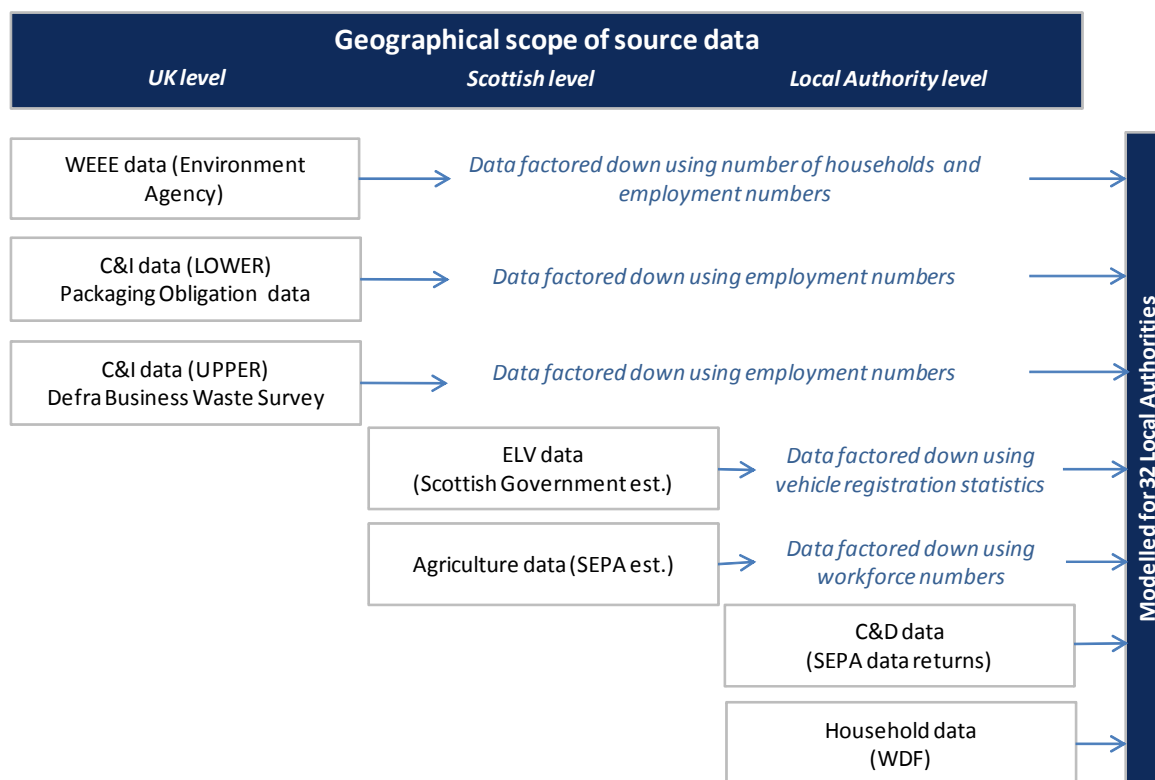
In addition to these sources it was agreed to consider two specific waste streams that had a significant plastic component. These were:

- Waste Electrical & Electronic Equipment (WEEE)
- End of Life Vehicles (ELV)

To avoid double counting the WEEE and ELV waste arisings were not included in the analysis of the household, C&I, C&D and agricultural waste sources.

In terms of identifying the plastic types arising from these sources it became apparent that the available composition data about each waste stream used a variety of different classifications of plastic. Some of these are relatively detailed (e.g. the composition of mixed residual household waste has 14 different types of plastic whereas the composition of mixed residual C&I waste has six different plastic types).

The structure of the arisings model is shown in the figure below.



**Figure A1: Structure of the Plastic Arisings Model**

The following section describes the data sources, their limitations and the assumptions used in estimating plastic arisings at the Local Authority level.

## 2. Data Sources, Assumptions and Limitations

### 2.1 Quantity and Type of Plastic Arisings

The baseline year used to develop the model was 2009. Although more recent data was available for some waste streams (e.g. households and WEEE), 2009 was the most recent year where data from all sources was available.

During the process of developing the model it became apparent that there were significant variations in the estimated plastic arisings from the C&I waste stream. The four alternative calculation methodologies were based on:

- Environment Agency published estimates of plastic packaging used in connection with statutory producer responsibility obligations (factored down to a Scottish level using proxies of number of employees and number of households)
- Environment Agency published estimates of plastic packaging used in connection with statutory producer responsibility obligations (factored down to a Scottish level using the Zero Waste Plan data estimate of 10% of UK arisings)
- Defra C&I business waste survey data (combined with a composition analysis)
- SEPA C&I business waste survey data (combined with a composition analysis)

These are discussed in detail in the section on C&I.

#### *2.1.1 Obtaining Scottish level estimates from UK data*

Where UK data was used then two methods were used to estimate a figure for Scotland. If the figure related to business arisings then a percentage of total employment in Scotland of 8.80% of the UK level was used (source: Business Register Employment Survey – 2009, p.2 'Total employment' category - <http://www.ons.gov.uk/ons/taxonomy/index.html?nscl=Regional+Employment>). The limitations to this approach are that different sub-sectors of the economy can have different levels of employment and waste arisings.

If the figure was related to households then relative stock of dwellings was used as a method of estimating Scottish data from UK data. A figure of 9.11% was used (source: Regional Trends Online Tables – Regional Statistics, Housing, Office for National Statistics, Table 7.1 – Stock of Dwellings (2009 data) - <http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-53882>). This includes both vacant and occupied dwellings and it is assumed that Scotland has a similar proportion of 'vacant to occupied' as the UK.

#### *2.1.2 Obtaining Local Authority level estimates from Scottish data*

Whilst some data (such as household waste arisings) can be sourced at Local Authority level, other data needs to be estimated from Scottish level data.

If the data is related to business arisings then a percentage of employment in each Local Authority area is used to estimate the data (source: Scottish Annual Business Statistics 2009, Scottish Government, p.86, 'Total employment' category - <http://www.scotland.gov.uk/Topics/Statistics/Browse/Business/SABS>). The limitations of this source include the lack of inclusion of data from agriculture, financial and public sectors of the economy. Agriculture is dealt with separately in our model and the sources and assumptions are described later in this section. The survey is used to provide relative proportions of business activity by Local Authority using a common definition so it is considered to be a reasonably robust way of deriving Local Authority level estimates. The apportionment of Scottish arisings of WEEE and ELVs are described in the relevant sections later in this section.

The key sources of data, its limitations and assumptions made for each waste stream are described in the following sections.

### 2.1.3 Estimated Arisings from Household Sources

The data sources used are:

- SEPA Waste Data Digest 11: Key Facts and Trends - [http://www.sepa.org.uk/waste/waste\\_data/waste\\_data\\_digest.aspx](http://www.sepa.org.uk/waste/waste_data/waste_data_digest.aspx)
- The composition of municipal solid waste in Scotland, Zero Waste Scotland, April 2010 - [http://www.zerowastescotland.org.uk/sites/files/wrap/Scotland\\_MS\\_W\\_report\\_final.pdf](http://www.zerowastescotland.org.uk/sites/files/wrap/Scotland_MS_W_report_final.pdf)
- Waste Data Flow (data downloads of Local Authority returns) - <http://www.wastedataflow.org/>

Data for each Local Authority was downloaded from the Waste Data Flow (WDF) online tool. The data included the quantity of household mixed waste collected for the four quarters between April 2009 and March 2010, the mixed waste received from households at civic amenity sites for the same period, the street litter from the same period (all from Q23 in WDF) and the quantity of plastic collected from commercial, industrial or other non household sources (Q11 in WDF). The latter figure was used to deduct from the total plastic collected for recycling from municipal solid waste sources (from Table 12 in the Waste Data Digest 11 data tables, where the data is split by Local Authority). All the household kerbside collected plastic is assumed to have the following composition (derived from the composition analysis of kerbside dry recyclables in Table D1 of the ZWS composition analysis).

Composition of kerbside dry recyclables (DR)		% of total kerbside DR collection	% of plastics in DR kerbside collection	Assumed Polymer Type	% of plastics in DR kerbside collection
Plastic Film					
	Carrier bags	0.10%	3.30%	LDPE	8.9%
	Bin Bags	0.02%	0.66%		
	Plastic Packaging Film	0.13%	4.29%		
	Other plastic film	0.02%	0.66%		
	<b>Total Plastic Film</b>	<b>0.27%</b>	<b>8.91%</b>		<b>8.9%</b>
Dense Plastic					
	1. PET drink bottles	1.05%	34.65%	PET	42.2%
	1. Other PET packaging	0.23%	7.59%		
	2. HDPE drink bottles	0.70%	23.10%	HDPE	31.0%
	2. Other HDPE	0.24%	7.92%		
	3. PVC	0.03%	0.99%	PVC	1.0%
	5. PP	0.14%	4.62%	PP	4.6%
	6. PS	0.06%	1.98%	PS (incl. EPS)	2.6%
	7. EPS	0.02%	0.66%		
	Other dense plastic packaging	0.16%	5.28%	Other Plastic	9.6%
	Other dense plastic	0.13%	4.29%		
	<b>Total Dense Plastic</b>	<b>2.76%</b>	<b>91.09%</b>		<b>91.1%</b>
	<b>Total Plastic</b>	<b>3.03%</b>	<b>100.00%</b>		<b>100.0%</b>

**Figure A2: Assumed Composition of Household Kerbside Collected Plastics**

*It is worth noting that even though the capability exists in WDF for Local Authority to record the types of plastic collected at the kerbside there was no data in these fields for 2009/10 period.*

The household mixed waste collected from the kerbside, received at civic amenity sites and collected as street litter are then 'decomposed' using the aforementioned composition analysis (Tables D1, D2 and D3) to identify the plastic element.

The categories used in the composition analysis were then allocated as per the table below:

Primary Category	Secondary Category	Assumed packaging or non-packaging?
Plastic Film		
	Carrier bags	Packaging
	Bin Bags	Packaging
	Plastic Packaging Film	Packaging
	Other plastic film	Non-packaging
	<i>Total Plastic Film</i>	
Dense Plastic		
	1. PET drink bottles	Packaging
	1. Other PET packaging	Packaging
	2. HDPE drink bottles	Packaging
	2. Other HDPE	Packaging
	3. PVC	Packaging
	5. PP	Packaging
	6. PS	Packaging
	7. EPS	Packaging
	Other dense plastic packaging	Packaging
	Other dense plastic	Non-packaging

**Figure A3: Assumptions on Whether Material is Packaging or Non-packaging**

The requirement to estimate the packaging element was driven by the goal of being consistent with packaging producer responsibility obligation data. This is discussed in greater detail in the C&I section.

A total figure for Scotland of 251,831 tonnes of plastic was estimated by aggregating the results derived for each of the 32 Local Authority. Each Local Authority estimate was calculated by:

- Identifying the tonnes of LA household residual waste collected between April 2009 and March 2010 (from Waste Data Flow) and applying the composition analysis from Table D1 (from The Composition of Municipal Solid Waste in Scotland, Zero Waste Scotland, April 2010) to identify the plastics in the residual collected waste
- Identifying the tonnes of residual household waste recycling centre (HWRC) waste between April 2009 and March 2010 (from Waste Data Flow) and applying the composition analysis from Table D2 (from The Composition of Municipal Solid Waste in Scotland, Zero Waste Scotland, April 2010) to identify the plastics in the residual HWRC waste
- Identifying the tonnes of LA collected street litter (assumed to be 'consumer – away from home' arisings) between April 2009 and March 2010 (from Waste Data Flow) and applying the composition analysis from Table D3 (from The Composition of Municipal Solid Waste in Scotland, Zero Waste Scotland, April 2010) to identify the plastics in the LA collected street litter
- Identifying the tonnes of plastic collected for recycling by LA's (SEPA Waste Data Digest 09/10, Table 12) and (as this also contains trade recycling collections) subtracting the tonnes of non-household plastic recycling (sourced from Waste Data Flow April '09 to March '10). This figure is combined with the composition analysis from Table D1 (from The Composition of Municipal Solid Waste in Scotland, Zero Waste Scotland, April 2010) to identify the assumed breakdown of plastics collected for recycling from households by LAs
- The four sources of household plastic were then added together to get a total for the LA area. These were combined to give the total figure for Scotland of 251,831 tonnes
- Using the assumed split of packaging / non-packaging from figure A3, above, the Scottish level data (presented in the same composition categories) was then allocated between packaging and non-packaging
- The above methodology results in an estimate of 202,277 tonnes of plastic packaging and 49,554 tonnes of non-packaging plastic



The average household baseline recycling rate for plastics is 8.5% (21,358 tonnes). The Economic Assessment of Scotland's Zero Waste Plan assumes that dense plastic from households will achieve a recycling rate of 45% by 2025 and it is assumed that a rate of 40% will be achieved by 2014.

It is estimated that the baseline plastic film recycling rate is 0% and the Economic Assessment of Scotland's ZWP assumes that a 15% recycling rate will be achieved by 2025. Following the overall growth rate of projected household recycling in figure 25, we have assumed that plastic film recycling will be 12% by 2014.

### 2.1.4 Estimated Arisings from C&D Sources

The data sources used are:

- SEPA Construction and Demolition waste produced and managed in Scotland 2009 - [http://www.sepa.org.uk/waste/waste\\_data/commercial\\_industrial\\_waste/construction\\_demolition.aspx](http://www.sepa.org.uk/waste/waste_data/commercial_industrial_waste/construction_demolition.aspx)
- Composition of the virtual container by EWC and sector (by % weight), Building the future 2005-2006 - A survey on the arising and management of construction and demolition waste in Wales 2005-2006, Environment Agency Wales (Table A6.2 C&D Waste arisings by type identifying separate fractions and arisings in mixed waste, p.117) - <http://publications.environment-agency.gov.uk/PDF/GEWA0308BNRR-E-E.pdf>
- APRICOD Guide – Towards Sustainable Plastic Construction and Demolition Waste Management in Europe, p.12 - [http://ec.europa.eu/environment/life/themes/waste/documents/guide\\_apricod.pdf](http://ec.europa.eu/environment/life/themes/waste/documents/guide_apricod.pdf)
- Economic Assessment of the Zero Waste Plan for Scotland, ZWS, Table 38, p.91 (Dense plastic recycling rate for C&D) - <http://www.zerowastescotland.org.uk/ZWPcostbenefit>

The SEPA C&D data is collated from statutory returns from licensed/permitted waste management sites and from exempt activities registered under paragraphs 9 and 19 of the Waste Management Licensing Regulations.

Table 1 of the 2009 SEPA C&D waste data provides estimates of waste generated. Separately recorded plastic waste was 1,445 tonnes and mixed C&D waste generated was 1,047,006 tonnes. Table 3 presents the waste managed (which includes an element of double counting as the same waste may be transferred from one licenced operator to another). Table 3 presents the waste managed within each Local Authority area. To derive an estimate of waste generated within each Local Authority area then the separately recorded plastic and mixed C&I waste data has to be manipulated using the ratios presented in the table below:

	Plastic	Mixed C&D
Waste Managed	835	1,150,507
Est. Waste Generated	1,445	1,047,006
Ratio (Generated : Managed)	1.73 : 1	0.91 : 1

#### Figure A4: Ratio of Waste Generated to Waste Managed

The above Scottish level data is used to convert the Local Authority level estimates of plastic and mixed C&D managed to an estimate of the plastic and mixed C&D waste generated.

The proportion of the mixed C&D waste that is plastic is assumed to be 3.25%. This is taken from the composition data presented in the aforementioned Environment Agency Wales report.

Data on the split between packaging and non-packaging plastic waste in construction is very limited. An estimate is made based on the consumption of polymer type by the construction sector (using estimates from the APRICOD Guide). This suggests that PVC (Lining, flooring, window frames, shutters pipes, cables) accounts for 47% of plastic use; EPS/XPS/PU (insulation) accounts for 18%; HDPE/LDPE (pipes, lining, wires and cables) accounts for a further 18%. Of course, an element of the polythene will be used for packaging film. The remaining 17% is made up of PP, PU, PA, PMMA, PC, UP, and 'Amino/POM/ABS'. The packaging element is likely to arise from the polythene, e.g. in the form of film wrap to protect timber, sacks for basic building materials, etc. Based on the above

figures, an estimate for plastic packaging is assumed to be 5% of total plastics in the C&D waste stream. All separately identified plastic waste is assumed to be PVC from doors, windows etc as this is the most common plastic material recycled from the C&D waste stream.

A total of 35,473 tonnes of C&D plastic are estimated for Scotland (with 1,774 tonnes categorised as packaging and 33,699 tonnes categorised as non-packaging).

The majority of plastic waste from C&D is assumed to be dense plastic. A recycling rate of 18% was used to align with the figure used in the recent Economic Assessment of the Zero Waste Plan. It is assumed that the 5% plastic packaging is film and that the recycling rates that can be achieved for this material are similar to the film recycling rates for the industrial waste stream (i.e. 50% by 2025, with 2014 assumed to be 45%). Dense plastic recycling from C&D sources is projected to increase to 75% by 2025 with 70% by 2014.

#### 2.1.4 *Estimated Arisings from Agricultural Sources*

The data sources used are:

- SEPA – Non-natural Agricultural Waste Arisings – 2009 Estimates (based on the Agricultural Waste Estimates Model, Marcus Hodges Environment and BDB Associates) – provided via personal communication with SEPA, December 2011
- Final Report – Research Trial 6/7 – UK AWP Waste Arisings, Valpak/ADAS, 2007
- Scottish Agricultural Census Summary Sheets by Geographic Area: June 2009, Total Workforce Table, p.31, Scottish Government and Environmental Research and Analysis Directorate - Rural and Environmental Services Division –
- <http://www.scotland.gov.uk/Publications/2010/03/16165732/30>
- Scottish Local Government Financial Statistics 2008-09, Table 1.1 Local Authority Population and Area, 2008-09 –
- <http://www.scotland.gov.uk/Publications/2010/03/23110606/1>
- Percentage Population Estimates by Urban Rural Classification, General Register Office for Scotland (GROS), 2008 –
- <http://www.scotland.gov.uk/Resource/Doc/933/0103167.pdf>
- 2004 Consultation paper on Producer Responsibility for Non-packaging Waste Agricultural plastics, Scottish Government –
- <http://www.scotland.gov.uk/Publications/2004/12/20408/48739>

Data on the level of agricultural activity by Local Authority area could not be identified. The Agricultural Census did provide data on workforce by region but this did not map fully onto the 32 Local Authority areas as several regions required further disaggregation.

This disaggregation was carried out using a combination of landmass occupied weighted using a scoring system based on the Local Authority's six-fold urban rural classification. The weighting was calculated as the sum of the percentage of the population multiplied by each classification rank, minus 1. This resulted in a higher weighting score for populations that tended to be more rural and lower for those that tended to be more urban (taking this as a proxy for agricultural activity). The weightings developed for each Local Authority area are shown in the figure below.

Percentage of population in each Urban Rural Classification - Council Areas, 6-fold							
CA_NAME	1	2	3	4	5	6	Weighting Factor
Aberdeen City	92.9	0.0	5.4	0.0	1.6	0.0	0.09
Aberdeenshire	0.0	26.0	10.0	11.2	36.8	16.0	1.23
Angus	7.9	53.0	11.6	0.0	26.7	0.8	0.53
Argyll & Bute	0.0	17.2	0.0	30.0	7.6	45.2	3.26
Clackmannanshire	0.0	57.5	28.3	0.0	14.2	0.0	1.00
Dumfries & Galloway	0.0	28.1	17.3	7.6	25.0	21.9	1.70
Dundee City	99.6	0.0	0.0	0.0	0.4	0.0	0.00
East Ayrshire	0.0	37.1	28.3	7.5	18.5	8.6	1.41
East Dunbartonshire	60.4	26.4	7.5	0.0	5.7	0.0	0.36
East Lothian	23.3	10.8	23.3	15.0	24.7	2.9	0.92
East Renfrewshire	86.5	0.0	9.5	0.0	4.0	0.0	0.15
Edinburgh, City of	96.3	0.0	2.6	0.0	1.1	0.0	0.04
Eilean Siar	0.0	0.0	0.0	21.1	0.0	78.9	4.58
Falkirk	0.0	90.9	0.0	0.0	9.1	0.0	0.82
Fife	0.0	66.5	15.7	0.0	17.8	0.0	0.80
Glasgow City	99.8	0.0	0.0	0.0	0.2	0.0	0.00
Highland	0.0	25.8	0.0	23.1	10.5	40.6	2.88
Inverclyde	0.0	86.4	8.0	0.0	5.6	0.0	0.97
Midlothian	0.0	68.2	14.5	0.0	17.3	0.0	0.80
Moray	0.0	24.0	18.5	14.2	29.1	14.2	1.45
North Ayrshire	0.0	70.4	19.0	0.0	5.7	4.9	1.27
North Lanarkshire	66.7	15.7	10.8	0.0	6.8	0.0	0.30
Orkney Islands	0.0	0.0	0.0	32.8	0.0	67.2	4.34
Perth & Kinross	1.2	31.1	9.8	10.9	30.2	16.7	1.37
Renfrewshire	76.0	10.1	9.5	0.0	4.4	0.0	0.25
Scottish Borders	0.0	25.2	18.8	4.9	39.0	12.0	0.99
Shetland Islands	0.0	0.0	0.0	29.1	0.0	70.9	4.42
South Ayrshire	0.0	67.6	4.2	6.2	17.8	4.3	0.98
South Lanarkshire	22.4	55.6	9.6	0.0	11.0	1.3	0.70
Stirling	0.0	51.8	13.6	0.0	27.1	7.5	0.89
West Dunbartonshire	49.6	49.1	0.0	0.0	1.3	0.0	0.48
West Lothian	0.0	81.3	8.9	0.0	9.8	0.0	0.89
<b>Scotland</b>	<b>38.9</b>	<b>30.6</b>	<b>8.5</b>	<b>3.8</b>	<b>11.6</b>	<b>6.5</b>	

**Figure A5: Calculated Weighting Factors for each Local Authority Area**

The above weightings were then used in conjunction with the land mass to disaggregate the regional estimates of agricultural employment, as shown in the figure below.

Regional Grouping	Local Authority	Census Total Workforce data	Land mass (sq km)	Relative weighting based on urban rural classification	Weighted land mass (sq km)	Disaggregated workforce data	Percentage to be applied to Scottish Waste Arisings
Shetland	Shetland	2,131				2,131	3.20%
Orkney	Orkney	1,971				1,971	2.96%
Eileanan an Iar	Eileanan an Iar	4,242				4,242	6.37%
Highland	Highland	9,814				9,814	14.73%
NE Scotland		11,198					
	Aberdeen City		186	0.09	17	18	0.03%
	Aberdeenshire		6313	1.23	7,753	7,874	11.82%
	Moray		2238	1.45	3,255	3,306	4.96%
Tayside		8,507					
	Angus		2182	0.53	1,163	1,178	1.77%
	Dundee City		60	0.00	0	0	0.00%
	Perth & Kinross		5286	1.37	7,239	7,330	11.00%
Fife	Fife	2,993				2,993	4.49%
Lothian		2,622					
	East Lothian		679	0.92	626	1,262	1.89%
	Edinburgh, City of		264	0.04	11	22	0.03%
	Midlothian		354	0.80	283	570	0.86%
	West Lothian		427	0.89	381	769	1.15%
Scottish Borders	Scottish Borders	3,958				3,958	5.94%
East Central		1,995					
	Clackmannan		159	1.00	159	135	0.20%
	Falkirk		297	0.82	243	206	0.31%
	Stirling		2187	0.89	1,954	1,655	2.48%
Argyll & Bute	Argyll & Bute	2,566				2,566	3.85%
Clyde Valley		3,957					
	East Dunbartonshire		175	0.36	62	139	0.21%
	East Renfrewshire		174	0.15	26	59	0.09%
	Glasgow, City of		175	0.00	0	-1	0.00%
	Inverclyde		160	0.97	155	345	0.52%
	North Lanarkshire		470	0.30	143	320	0.48%
	Renfrewshire		261	0.25	65	145	0.22%
	South Lanarkshire		1772	0.70	1,247	2,781	4.17%
	West Dunbartonshire		159	0.48	76	169	0.25%
Ayrshire		3,939					
	East Ayrshire		1262	1.41	1,775	1,705	2.56%
	North Ayrshire		885	1.27	1,127	1,082	1.62%
	South Ayrshire		1222	0.98	1,198	1,151	1.73%
Dumfries & Galloway	Dumfries & Galloway	6,748				6,748	10.13%
	<b>Total</b>	<b>66,641</b>				<b>66,641</b>	<b>100.00%</b>

**Figure A6: Estimating the Percentage of Scottish Agricultural Activity within Local Authority Areas**

The percentages in the right hand column of the above figure were then applied to the national estimate of agricultural plastic waste arisings supplied by SEPA.

The packaging element of this is taken to be 9.5% (Final Report – Research Trial 6/7 – UK AWP Waste Arisings, Valpak/ADAS, June 2007). This is consistent with the estimated agricultural packaging levels suggested in the Scottish Government’s 2004 Consultation paper on Producer Responsibility for Non-packaging Waste Agricultural plastics.

The assumption used in the model is that the total agricultural plastic waste arisings in Scotland is 22,945 tonnes (with 2,180 tonnes of this being categorised as packaging and 20,765 tonnes categorised as non-packaging).

A recycling rate of 20% was used for plastic arising from this source. This is based on an average UK estimate of non packaging agricultural plastics in 2009 by the British Plastics Federation Films Working Group - [http://www.bpf.co.uk/Recycling/Working\\_Groups/Films.aspx](http://www.bpf.co.uk/Recycling/Working_Groups/Films.aspx).

Robust evidence about projected increases in agricultural waste plastic recycling was not found during the research. Through discussions with stakeholders it was assumed that a 50% recycling rate was possible by 2025 with the rate in 2014 assumed to be 30%.

### 2.1.4 *Estimated Arisings from WEEE*

The data sources used are:

- Electrical and Electronic Equipment placed on the market (data report), Environment Agency –
- <http://www.environment-agency.gov.uk/business/topics/waste/111016.aspx>
- Scottish level data concerning arisings of WEEE from households is converted to a Local Authority by using data on number of households by Local Authority (source: Estimates of Households and Dwellings in Scotland, 2010, National Records of Scotland – p.31, Table 1: Household estimated for Scotland by Local Authority area (2009 data) - <http://www.gro-scotland.gov.uk/files2/stats/household-estimates/he-10/households-dwellings-est-2010.pdf>
- Partial financial impact assessment of a Quality Protocol for the manufacture of secondary raw materials from waste non-packaging plastics, WRAP/Environment Agency, 2008, Table 3, p.4 – [http://www.environment-agency.gov.uk/static/documents/Business/Financial\\_impact\\_assessment\\_non-packaging\\_plastic\\_.pdf](http://www.environment-agency.gov.uk/static/documents/Business/Financial_impact_assessment_non-packaging_plastic_.pdf)

The recycling rates for assessing compliance under the WEEE producer responsibility legislation are calculated on the basis of the WEEE received for treatment compared to the average tonnes of electrical and electronic equipment placed on the market in the previous two years. The latter is taken as a proxy for WEEE arisings, even though there is not a perfect correlation between new sales of EEE and WEEE entering the waste stream.

Based on this principle we can calculate the annual average WEEE placed on the market (split by household and non-household) using data published by the Environment Agency (UK EEE data reports).

The total household EEE placed on the market in the UK in 2009 was 1,220,348 tonnes. The equivalent figure for 2010 was 1,206,246 tonnes. The associated estimate of average annual household WEEE arisings was 1,213,297 tonnes. The estimate can be presented at a Scottish level by using population as a proxy (Scotland having 9.11% of UK dwellings). This results in an estimate of household WEEE arisings for Scotland of 110,531 tonnes. This is disaggregated to Local Authority level in the model using number of households as a proxy.

The total Non- household EEE placed on the market in the UK in 2009 was 326,217 tonnes. The equivalent figure for 2010 was 328,329 tonnes. The associated estimate of average annual Non-household WEEE arisings was 327,273 tonnes. The estimate can be presented at a Scottish level by using 'total employment' a proxy (Scotland having 8.80% of UK total employment). This results in an estimate of Non- household WEEE arisings for Scotland of 28,800 tonnes. This is disaggregated to Local Authority level in the model using total employment as a proxy.

The total estimated Scottish WEEE arisings are, therefore, 139,331 tonnes.

Data on the average plastic composition of WEEE is limited. An estimate of 22% plastic content is used based on data in the partial financial impact assessment of a Quality Protocol for the manufacture of secondary raw materials from waste non-packaging plastics published by WRAP/Environment Agency. This results in an estimated plastic waste arisings figure from the WEEE waste stream of 30,653 tonnes. All of this plastic waste is classified as non-packaging.

The WRAP/Environment Agency partial financial impact assessment also provides an estimated recycling rate of plastic from WEEE of 31%. This recycling rate is used in the model. The same source provides a projected 2015 recycling rate of 37%. It is assumed that the recycling rate of plastic from WEEE will reach 35% by 2014 and 40% by 2025.

### 2.1.6 *Estimated Arisings from ELV*

The data sources used are:

- Producer Responsibility: Policy Evaluation Final Report to the Scottish Government, Eunomia, 2011 - <http://scotland.gov.uk/Resource/Doc/211199/0120460.pdf>

- Table 1.3 Vehicles licenced as at 31 Dec 2009 by council and tax group, Scottish Transport Statistics No. 29: 2010 Ed, Scottish Government – <http://www.scotland.gov.uk/Publications/2010/12/17120002/19>
- Partial financial impact assessment of a Quality Protocol for the manufacture of secondary raw materials from waste non-packaging plastics, WRAP/Environment Agency, 2008, Table 3, p.4 – [http://www.environment-agency.gov.uk/static/documents/Business/Financial\\_impact\\_assessment\\_non-packaging\\_plastic\\_.pdf](http://www.environment-agency.gov.uk/static/documents/Business/Financial_impact_assessment_non-packaging_plastic_.pdf)
- Assessment of the Environmental Advantages and Drawbacks of Existing and Emerging Polymers Recovery Processes - Annexes to Final Report, JRC (Delgado et al), 2007, Figure 3.7 - Average vehicle plastic content in 00's - [http://ftp.jrc.es/EURdoc/22939\\_Annexes.pdf](http://ftp.jrc.es/EURdoc/22939_Annexes.pdf)

It is estimated that there were 109,000 vehicles treated at Scottish Authorised Treatment Facilities (Producer Responsibility: Policy Evaluation Final Report to the Scottish Government, Eunomia, 2011, p.100).

The average vehicle weight of a vehicle is assumed to be 1 tonne and the plastics content of that is 12% (Table 10.5, p.124 of the above report). This means that the estimated plastics arisings from ELVs is 13,080 tonnes (12% of 109,000 tonnes). All of this plastic waste is classified as non-packaging.

The level of plastics reuse/recycling/recovery from vehicles is assumed to be 20% (Producer Responsibility: Final Report to the Scottish Government, Eunomia, 2011, Table 10-5, p.126). The Partial financial impact assessment of the Quality Protocol for the manufacture of secondary raw material from waste non-packaging plastics provides a projected recycling rate for plastic from ELV of 40% to 70% by 2015. It has been assumed that the recycling rate for plastic in ELV will be 35% by 2014 and 70% by 2025.

The breakdown of plastic type used in the model is shown below (based on the Delgado et al report):

Typical composition of plastic types from ELVs	%
PP	59%
PU	18%
PE	9%
ABS	5%
Other	9%

**Figure A7: Breakdown of Plastics in ELV**

The data is disaggregated to Local Authority level using the number of vehicles licensed by Local Authority area as a proxy.

### 2.1.7 Estimated Arisings from C&I Sources

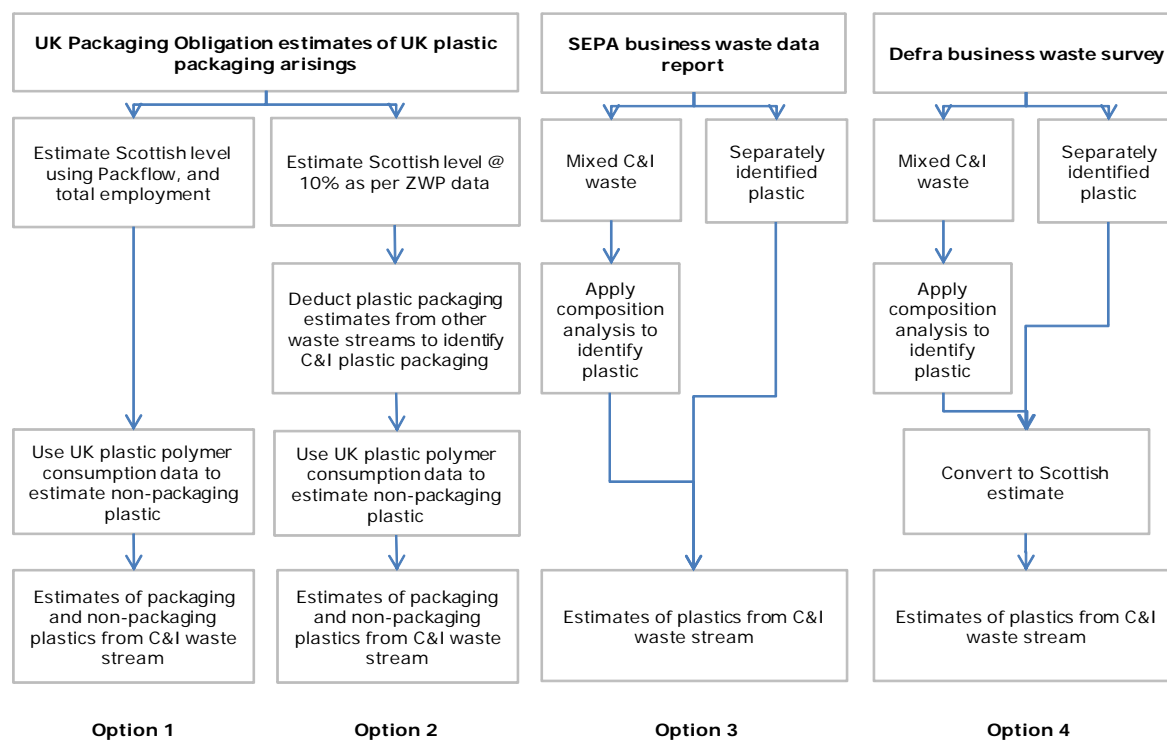
The data sources used are:

- Zero Waste Plan Data - Table 12 – Scottish packaging waste arisings 2004-2009 (tonnes) – [http://www.sepa.org.uk/waste/waste\\_data/zero\\_waste\\_plan\\_data.aspx](http://www.sepa.org.uk/waste/waste_data/zero_waste_plan_data.aspx)
- PackFlow 2012 Volume 1: Summary Report & Recommendations, Valpak, 2009 – [http://www.valpak.co.uk/Libraries/Packaging\\_Compliance\\_Documents/PackFlow\\_2012\\_Summary\\_Report\\_and\\_Recommendations.sflb.ashx](http://www.valpak.co.uk/Libraries/Packaging_Compliance_Documents/PackFlow_2012_Summary_Report_and_Recommendations.sflb.ashx)
- SEPA Business waste data report 2009 (and associated data tables) – [http://www.sepa.org.uk/waste/waste\\_data/commercial\\_industrial\\_waste/business\\_waste\\_survey.s.aspx](http://www.sepa.org.uk/waste/waste_data/commercial_industrial_waste/business_waste_survey.s.aspx)
- Overall Composition for all Mixed I&C waste, Environment Agency Wales I&C Waste Analysis Study, SLR, 2007 – [http://www.environment-agency.gov.uk/static/documents/Research/biodegwals\\_1913611.pdf](http://www.environment-agency.gov.uk/static/documents/Research/biodegwals_1913611.pdf)
- Non-packaging plastics report, Waste Protocols Project, Environment Agency, 2007 - [http://www.environment-agency.gov.uk/static/documents/Business/Technical\\_report\\_for\\_non-packaging\\_plastics\\_.pdf](http://www.environment-agency.gov.uk/static/documents/Business/Technical_report_for_non-packaging_plastics_.pdf)



- Commercial and Industrial Waste Survey 2009 – Final Report, Jacobs (commissioned by Defra) 2011 – <http://archive.defra.gov.uk/evidence/statistics/environment/waste/documents/commercial-industrial-waste101216.pdf>
- C&I survey breakdown from Defra (more detailed segmentation of non-metallic waste) – data from above survey supplied via personal communication with WRAP

There are four options which can be used to estimate the plastic arisings from the C&I waste stream. These are summarised in the figure below.



**Figure A8: Alternative Options to Estimate Plastic Arising from the C&I Waste Stream**

Each option is discussed below.

### Option 1

This option starts with the UK estimated plastic packaging waste arisings in 2009 of 2,442,000 tonnes.

PackFlow 2012 suggests the breakdown of sources of plastic packaging is:

- 32% Non-consumer
- 11% Consumer (away from home)
- 57% Consumer (household)

If we assume that the 32% 'non-consumer' equates to C&I then we can estimate UK plastic packaging waste arisings as 781,440 tonnes. By default this assumes that the remainder be allocated to households in the categories used for our model (with arisings occurring at kerbside collections and through street litter collections). The household element of this is therefore 1,660,560 tonnes (68% of 2,442,000), assuming that household includes the 11% 'consumer (away from home)', via street litter, for example.

The Scottish share of the UK C&I arisings can then be estimated by using the Scottish share of UK total employment (8.80%). This results in an estimate for Scottish C&I plastic packaging arisings of 68,767 tonnes.

*(Note: the Scottish estimate of the household plastic packaging can be derived using the proportion of Scottish dwellings compared to UK dwellings (9.11%). This results in an estimate of 151,277*

tonnes (considerably less than the estimated arisings from households from the model – 202,277 tonnes of plastic packaging). Adding this to the C&I plastic packaging estimate of 69,392 tonnes and combined arisings from agriculture (2,180 tonnes) and C&D (1,774 tonnes) results in total Scottish plastic packaging estimate of 224,623 tonnes, around 19,577 tonnes less than the 244,200 tonnes used in the Zero Waste Plan data)

An estimate of the non-packaging plastic arisings from the C&I waste stream in Scotland can then be derived by using data on polymer consumption (the limitations of this approach includes the different rates at which plastic flows through the various sectors of the economy – for example plastic used in construction will take much longer to flow through the waste stream than plastic used in packaging). Polymer consumption estimates are found in Table C1 of the Environment Agencies technical report on non-packaging plastic. This is summarised below along with the assumed waste stream destination of each:

- Packaging – 37% (split 32% C&I and 68% Household – implying 11.8% of overall consumption is plastic packaging in C&I)
- Building/construction – 23% (C&D – although the time between consumption and waste arisings is much more significant than is the case for packaging)
- WEEE – 8% (WEEE)
- Transport – 8% (ELV)
- Furniture/homeware – 8% (Household)
- Agriculture/horticulture – 7% (Agriculture)
- Toys, leisure and sport – 3% (Household)
- Medical – 2% (C&I)
- Mechanical engineering – 2% (C&I)
- Footwear – 1% (Household)
- Other – 1% (Unknown due to lack of clarity on definition)

The ratio we are trying to identify is:

***Plastic packaging in the C&I waste stream: Non-packaging plastic in the C&I waste stream***

It is assumed that plastic packaging in the C&I waste stream is 11.8% of total plastic waste arisings (see first bullet point in above list)

We are also assuming that non-packaging plastic in the C&I waste stream is 4% (that is 2% Medical plus 2% Mechanical engineering).

The ratio is therefore 11.8: 4 (2.95: 1). This is the proposed method of transforming a C&I plastic packaging figure to a total C&I plastic figure.

Taking the previously estimated Scottish C&I plastic packaging arisings of 68,767 tonnes then (using the above ratio) this suggests a Scottish C&I non-packaging plastic arisings figure of 23,311 tonnes (69,392/2.95). The total C&I plastics estimate using option 1 is therefore 92,078 tonnes.

## **Option 2**

As with option 1, this option starts with the UK estimated plastic packaging waste arisings in 2009 of 2,442,000 tonnes.

The Zero Waste Plan data assumption of 10% of UK packaging data is used, i.e. total plastic packaging arisings in Scotland is 244,200 tonnes.

An estimate of C&I plastic packaging arisings can be made by deducting the plastic packaging estimates from all other waste streams based on the model calculations (household – 202,277 tonnes, C&D – 1,774 tonnes and agriculture – 2,180 tonnes). This results in an estimate of 37,970 tonnes. This is significantly lower than the 69,392 tonnes estimated in option 1.

The same process is used to estimate the non-packaging plastic from the C&I waste stream as was used in option 1. Using the derived ratio of plastic packaging: non-packaging plastic of 2.95: 1 suggests an estimate of Scottish C&I non-packaging plastic of 12,871 tonnes.

The total C&I plastic arisings based on option 2 is estimated to be 50,841 tonnes.



### Option 3

This option uses a combination of SEPA business waste data, a composition analysis of mixed C&I waste and a set of assumptions about which plastic categories used in the composition analysis were plastic packaging and which were non-packaging plastic.

The SEPA business waste data report for 2009 states that:

- There were 3,253,639 tonnes of mixed C&I waste
- There were 175,587 tonnes of separately recorded plastic waste

The following composition analysis data was used to estimate the amount of plastic in the mixed C&I waste:

Calculation based on 2007 EA Wales composition analysis of mixed C&I waste**				
Overall composition for mixed C&I waste		Assumed packaging or non-packaging?	Plastic packaging %	Non-packaging plastic %
Plastic Film		Est. %		
	Refuse sacks and carrier bags	1.6%	Packaging	1.6%
	Packaging film	5.1%	Packaging	5.1%
	Other plastic film	0.3%	Non-packaging	0.3%
	<i>Total plastic film</i>	<i>7.0%</i>		
Dense plastic				
	Dense plastic bottles	1.5%	Packaging	1.5%
	Other packaging	3.0%	Packaging	3.0%
	Other dense plastic	3.2%	Non-packaging	3.2%
	<i>Total dense plastic</i>	<i>7.7%</i>		
<b>Total estimated plastic composition</b>		<b>14.7%</b>	<b>Totals</b>	<b>11.2%</b>
				<b>3.5%</b>

\*\* Source: Overall Composition for all Mixed I&C waste, Environment Agency Wales I&C Waste Analysis Study, SLR, 2007, p.78

#### Figure A9: Mixed C&I Composition Data and Categorisation of Plastic

Using the assumptions in the above figure then the plastic packaging element of the mixed C&I waste stream is estimated to be 364,408 tonnes (11.2% of 3,253,639). Even assuming that none of the 175,587 tonnes of separately identified was plastic packaging (although it is almost certain a proportion would be, particularly the 134,823 tonnes from the commercial waste stream) then the estimate is considerably higher than what might be expected based on the Scottish share of UK plastic packaging arisings of 2,442,000 tonnes.

Even taking into account the wide confidence intervals around the expected value for the business waste data reports (up to +/- 59.8% at the 90% confidence level, based on a correlated error measure) the estimates via this source are still higher than would be expected (by comparison with Zero Waste Plan data on packaging). At the lower confidence limit (-59.8%) the estimated plastic packaging arisings are still 146,492 tonnes of plastic packaging from mixed waste plus 70,586 tonnes of separately recorded plastic.

There could be several contributory factors causing a higher than expected estimate from this source. These include:

- The original survey, upon which SEPA estimates are based, used self reporting by companies to estimate waste arisings. There may have been an overestimate of the mixed waste arisings and the separately recorded plastic
- The composition analysis used may be over estimating the amount of plastic present in the mixed C&I waste stream
- The assumptions about which types of plastic are packaging and which are non-packaging may be over estimating the amount of plastic that is actually packaging

There is insufficient evidence to judge the true extent and source(s) of any errors with this data set. Only through comparison with the assumed plastic packaging waste arisings for Scotland does it become apparent that the two figures are significantly different.

#### Option 4

The Defra C&I waste survey shows:

- There are 12.3 million tonnes of mixed C&I waste
- There are 0.91 million tonnes of separately recorded plastic (part of non-metallic waste)

The estimated plastic element of the mixed C&I waste (using the Environment Agency Wales composition analysis of mixed C&I) is 1,808,000 tonnes (14.7% of 12.3 million). Adding this to 910,000 tonnes of separately identified plastic waste gives a total of plastic waste arisings in England of 2,718,000 tonnes.

England has 84.09% of UK total employment (Business Register Employment Survey – 2009). Using this as a proxy we can estimate the UK plastic arisings from C&I sources as 3,232,251 tonnes. Scotland's share of UK total employment is 8.80%. Again, using this as a proxy we can estimate Scottish plastic waste arisings from C&I sources as 284,438 tonnes.

#### Options Selected for C&I

Comparing the different options that could be used to estimate the plastic waste arisings from the C&I waste stream highlights that survey based approaches combined with composition analysis (both in Scotland – option 3 and England – option 4) result in a significantly different result from the estimates based on the packaging waste data. These issues were discussed in depth with a sub-group of the project steering group and it was agreed to use a lower estimate using option 2 (derived from the ZWP data on plastic packaging arisings) and an upper estimate using option 4 (derived from the Defra business survey).

Option 1 would have resulted in an estimate that did not align with the ZWP data.

Option 4 was selected over option 3 as the Defra business survey was carried out in 2009 compared to the SEPA survey which was carried out in 2006. Although the SEPA data is updated each year to account for changes to the economic base the confidence intervals around the expected values were wider than the Defra survey.

The results for C&I waste plastics are therefore presented as a range which varies significantly. For example the Scottish C&I waste plastic figure has a lower estimate of 50,841 tonnes and an upper estimate of 284,438 tonnes. This feeds through into the overall lower and upper estimates for Scotland, reflecting the underlying uncertainty of arisings from C&I sources.

It is recommended that this significant variation between data derived from Defra (published business waste survey) and the Environment Agency (published packaging obligation data) be investigated further to identify why such an apparent variance exists.

#### Data-check using landfill data

SEPA landfill data can be used as a sense check of the estimated figures for plastic waste to landfill from C&I sources. This estimate is shown in the figure below.

2009 Data	Tonnes	Source
Total landfilled	4,415,378	SEPA Landfill capacity spreadsheet 2009 (Column Q)
HH landfilled	1,682,945	SEPA Waste Data Digest 11 - Tables (Table 3)
C&D landfilled	1,057,119	SEPA C&D Factsheet Tables 2009 (Table 2)
Total less HH and C&D	1,675,314	Could also include some Agri and ELV
Less ELV landfill estimate	17,985	165kg per tonne (109,000 tonnes) - Scottish Government Producer Responsibility Policy Evaluation
Less Agriculture landfill estimate	141,088	Estimate assuming <u>only</u> plastic recycled - based on SEPA data on 2009 total agricultural waste arisings SEPA Waste Data Digest 11 - Tables (Table 9) less estimated plastic recycled from this source
Remainder assumed as C&I	1,516,241	Note: Landfilled WEEE will be in the composition of both HH and C&I
<b>Estimated C&amp;I plastic sent to landfill</b>	<b>222,887</b>	EA Wales composition analysis (14.7% plastic composition of mixed C&I to landfill) - Result is very sensitive to % used
Lower C&I landfill estimate from model	27,963	
Upper C&I landfill estimate from model	156,441	

**Figure A10: Estimate of Plastic Waste to Landfill from C&I Based on SEPA Landfill Data**

The above figure estimates the plastic waste to landfill from C&I sources as 222,887 tonnes. This figure is very sensitive to the composition figure used (14.7% of mixed C&I to landfill is assumed to be plastic in the above figure). This compares with estimates from the model of 27,963 tonnes (lower) and 156,441 tonnes (upper).

It is assumed that 74% of C&I arisings are from commercial sources (the Scottish economy has a 'service' element of around 74%<sup>1</sup>) and the remaining 26% from industrial sources. Baseline recycling for both dense plastic and plastic film from both C&I is estimated to be 45%. The Economic Assessment of Scotland's ZWP assumes that maximum recycling rates for 2025 are:

- Commercial – Dense plastic 67% (assumed 65% by 2014) and Plastic film 57% (assumed 55% by 2014)
- Industrial – Dense plastic 80% (assumed 75% by 2014) and Plastic film 50% (assumed 49% by 2014)

### 2.1.8 Baseline and projected arisings and recycling by source

The figure below summarises the baseline and projected arisings and recycling levels for each waste stream. This is based on the recycling rates assumed for 2014 and 2025, which are consistent with those used in the Economic Assessment of the Zero Waste Plan (note that these are targets for 2025 and the associated 2014 targets are estimated based on the anticipated rate of increase shown in Figure 28):

- Household
  - Dense plastic – 45% (assumed to be 40% by 2014)
  - Plastic film – 15% (assumed to be 12% by 2014)
- Commercial
  - Dense plastic – 67% (assumed that all commercial plastic is plastic film)
  - Plastic film – 57% (assumed to be 55% by 2014)
- Industrial
  - Dense plastic – 80% (assumed to be 75% by 2014)
  - Plastic film – 50% (assumed that all industrial plastic is dense plastic)
- Construction and Demolition
  - Dense plastic – 75% (assumed to be 70% by 2014)

<sup>1</sup> Structure of the Scottish economy, Scottish Government – <http://www.scotland.gov.uk>

The Economic Assessment does not provide assumptions for:

- C&D – plastic film (we have assumed a recycling rate of 45% achieved by 2014 and 50% by 2025)
- Agriculture – plastic film and dense plastic (we have assumed 30% by 2014 and 50% by 2025 for both film and dense plastic)
- WEEE – dense plastic (assumed no plastic film from this waste stream) (assumed to be 35% by 2014 and 40% by 2025)
- ELV – dense plastic (assumed no plastic film from this waste stream) (assumed to be 35% by 2014 and 70% by 2025)

The above assumptions are described in more detail within the individual sections earlier in this Appendix A. Note that these projections are based on zero growth in arisings and no change to composition of the overall waste streams.

The assumed split of plastic film and dense plastic is shown in the figure below. This split was estimated to enable the data to be combined with the maximum recycling rates for each waste stream, which were used in the Economic Assessment of Scotland's Zero Waste Plan. The categorisation between plastic film and dense plastic was based on the following sources and assumptions

- Household – The Composition of Municipal Solid Waste in Scotland, Zero Waste Scotland, April 2010 – provides a composition analysis of residual collected waste, kerbside dry recyclables, household waste recycling centre waste and street litter collections. This is combined with total waste arisings figures for each of these waste streams from Waste Data Flow to estimate total household arisings by the categories shown. This provides a clear distinction between plastic film and dense plastic
- C&I – There is limited robust data on the arisings of C&I and the estimation of the upper and lower range of plastic arisings is described in detail in Appendix A. There is also limited robust information on the polymer composition of plastics from the C&I waste stream. For this report we have assumed that plastic from the commercial waste stream consists of plastic film (any WEEE is considered separately) and plastic from the industrial waste stream consists of dense plastic. It is acknowledged that this is a simple generalisation of the C&I waste stream and reflects the fact that no alternative evidence on composition was identified. The plastic waste arisings in C&I have been broken down to commercial (74%) and industrial (26%) based on data on the structure of the Scottish economy sourced from the Scottish Government (stating that Scotland has a 'service' element of around 74% - which is assumed to be equivalent to 'commercial')
- C&D – Data on the polymer breakdown of waste plastic from C&D sources is also limited. The breakdown used in this model is estimated using plastic consumption data (and assuming a 1:1 relationship between consumption and waste arisings) from APRICOD Guide – Towards Sustainable Plastic Construction and Demolition Waste Management in Europe.
- Agricultural – The plastic type categories used in the above figure are those reported by SEPA via its Non-natural Agricultural Waste Arisings model. The LDPE Film is obviously classed as plastic film with the remainder assumed to be dense plastic
- WEEE – all plastic arisings from WEEE are assumed to be dense plastic. Data to enable further refinement of polymer type was not identified during this research. While there were some reports examining the composition of small mixed WEEE no evidence could be found regarding the plastic polymer composition of 'average WEEE' covering all categories
- ELV – The breakdown of the typical composition of plastic types has been sourced from the Assessment of the Environmental Advantages and Drawbacks of Existing and Emerging Polymers Recovery Processes – Annexes to Final Report, JRC, (Delgado et al), 2007. All ELV plastic is classed as dense plastic

Household		Tonnes
	Carrier bags	20,959
	Bin bags	14,655
	Plastic packaging film	31,788
	Other plastic film	7,073
	<b>Total plastic film</b>	<b>74,475</b>
	1. PET drink bottles	30,316
	1. Other PET packaging	12,175
	2. HDPE drink bottles	16,842
	2. Other HDPE	7,870
	3. PVC	953
	5. PP	21,681
	6. PS	7,801
	7. EPS	4,522
	Other dense plastic packaging	32,715
	Other dense plastic	42,481
	<b>Total Dense Plastic</b>	<b>177,356</b>
	<b>Sub total households</b>	<b>251,831</b>
C&I		Tonnes
	LOWER ESTIMATE	50,841
	UPPER ESTIMATE	284,438
	<i>Commercial (74%) mainly plastic film</i>	
	<i>Industrial (26%) mainly dense plastic</i>	
C&D		Tonnes
	PVC	16,672
	EPS/XPS/PU (Insulation)	6,385
	HDPE/LDPE	6,385
	Other	6,030
	<b>Sub total C&amp;D</b>	<b>35,473</b>
Agriculture		Tonnes
	LDPE (Film)	19,008
	PP (Bale/Twine)	2,152
	HDPE (Netwrap)	1,242
	HDPE (Liquid containers)	301
	Silage Cores (mixed)	133
	Plastic oil drums	109
	<b>Sub total Agriculture</b>	<b>22,945</b>
WEEE		Tonnes
	Dense Plastic	30,653
	<b>Sub total WEEE</b>	<b>30,653</b>
ELV		Tonnes
	PP	7,074
	PU	2,158
	PE	1,079
	ABS	600
	Other	1,079
	<b>Sub total ELV</b>	<b>11,990</b>
<b>TOTAL</b>	LOWER ESTIMATE	<b>403,733</b>
	UPPER ESTIMATE	<b>637,330</b>

Plastic Type	Tonnes	
	Lower	Upper
Assumed plastic film (incl. 5% C&D)	132,879	305,741
Assumed dense plastic	270,854	331,589
<b>Total</b>	<b>403,733</b>	<b>637,330</b>

Figure A11: Assumed Split Between Plastic Film and Dense Plastics

The baseline recycling rates for 2009 are shown in the figure below.

Source	2009 Baseline		
	Plastic Arisings (T)	% Recycled	Plastic Recycled (T)
Household	251,831	8.5%	21,358
Commercial (Lower)			
Commercial (Upper)			
Industrial (Lower)			
Industrial (Upper)			
C&I (Lower)	50,841	45.0%	22,878
C&I (Upper)	284,438	45.0%	127,997
C&D	35,473	18.0%	6,385
Agriculture	22,945	20.0%	4,589
WEEE	30,653	31.0%	9,502
ELV	11,990	20.0%	2,398
<b>Total (Lower)</b>	<b>403,733</b>	<b>16.6%</b>	<b>67,111</b>
<b>Total (Upper)</b>	<b>637,330</b>	<b>27.0%</b>	<b>172,230</b>

**Figure A12: Baseline Plastic Recycling Rates for 2009, by Source**

This shows that (from all sources) the recycling rate varies from 16.6% to 27.0% and that the result is therefore highly sensitive to the uncertain C&I arisings.

The 2014 projected recycling of plastic film and dense plastic is summarised in the figure below.

Source	2014 Projections								
	Plastic Film Arisings (T)	% Recycling of Films	Plastic Film Recycled (T)	Dense Plastic Arisings (T)	% Recycling of Dense Plastic	Dense Plastic Recycled (T)	Total Plastic Recycling (T)	Total Plastic Arisings (T)	% of Total Plastic Recycled
Household	74,475	12.0%	8,937	177,356	40.0%	70,942	79,879	251,831	<b>32%</b>
Commercial (Lower)	37,622	55.0%	20,692						
Commercial (Upper)	210,484	55.0%	115,766						
Industrial (Lower)				13,219	75.0%	9,914			
Industrial (Upper)				73,954	75.0%	55,465			
C&I (Lower)							30,606	50,841	<b>60%</b>
C&I (Upper)							171,232	284,438	<b>60%</b>
C&D	1,774	45.0%	798	33,699	70.0%	23,590	24,388	35,473	<b>69%</b>
Agriculture	19,008	30.0%	5,702	3,937	30.0%	1,181	6,884	22,945	<b>30%</b>
WEEE				30,653	35.0%	10,729	10,729	30,653	<b>35%</b>
ELV				11,990	35.0%	4,197	4,197	11,990	<b>35%</b>
<b>Total (Lower)</b>	<b>132,879</b>	<b>27.2%</b>	<b>36,130</b>	<b>270,854</b>	<b>44.5%</b>	<b>120,552</b>	<b>156,682</b>	<b>403,733</b>	<b>39%</b>
<b>Total (Upper)</b>	<b>305,741</b>	<b>42.9%</b>	<b>131,204</b>	<b>331,589</b>	<b>50.1%</b>	<b>166,104</b>	<b>297,307</b>	<b>637,330</b>	<b>47%</b>

**Figure A13: Projected Film and Dense Plastic Recycling Levels for 2014, by Source**

The above figure shows the total recycling level (from all sources) now varying from between 39% and 47%.

The figure below shows the same set of data but for 2025.

Source	2025 Projections								
	Plastic Film Arisings (T)	% Recycling of Films	Plastic Film Recycled (T)	Dense Plastic Arisings (T)	% Recycling of Dense Plastic	Dense Plastic Recycled (T)	Total Plastic Recycled (T)	Total Plastic Arisings (T)	% of Total Plastic Recycled
Household	74,475	15.0%	11,171	177,356	45.0%	79,810	90,981	251,831	<b>36%</b>
Commercial (Lower)	37,622	57.0%	21,445						
Commercial (Upper)	210,484	57.0%	119,976						
Industrial (Lower)				13,219	80.0%	10,575			
Industrial (Upper)				73,954	80.0%	59,163			
C&I (Lower)							32,020	50,841	<b>63%</b>
C&I (Upper)							179,139	284,438	<b>63%</b>
C&D	1,774	50.0%	887	33,699	75.0%	25,275	26,161	35,473	<b>74%</b>
Agriculture	19,008	50.0%	9,504	3,937	50.0%	1,969	11,473	22,945	<b>50%</b>
WEEE				30,653	40.0%	12,261	12,261	30,653	<b>40%</b>
ELV				11,990	70.0%	8,393	8,393	11,990	<b>70%</b>
<b>Total (Lower)</b>	<b>132,879</b>	<b>32.4%</b>	<b>43,007</b>	<b>270,854</b>	<b>51.1%</b>	<b>138,282</b>	<b>181,289</b>	<b>403,733</b>	<b>45%</b>
<b>Total (Upper)</b>	<b>305,741</b>	<b>46.3%</b>	<b>141,538</b>	<b>331,589</b>	<b>56.4%</b>	<b>186,871</b>	<b>328,409</b>	<b>637,330</b>	<b>52%</b>

**Figure A14: Projected Film and Dense Plastic Recycling Levels for 2025, by Source**

The above figure shows the total recycling level (from all sources) now varying from between 45% and 52% (by 2025)

The figure below shows a summary of the previous three figures, for comparison.

Sources of plastic waste	Year					
	2009 Recycling		2014 Recycling		2025 Recycling	
	Tonnes	% of arisings	Tonnes	% of arisings	Tonnes	% of arisings
Household	21,358	8%	79,879	32%	90,981	36%
C&I (Lower)	22,878	45%	30,606	60%	32,020	63%
C&I (Upper)	127,997	45%	171,232	60%	179,139	63%
C&D	6,385	18%	24,388	69%	26,161	74%
Agriculture	4,589	20%	6,884	30%	11,473	50%
WEEE	9,502	31%	10,729	35%	12,261	40%
ELV	2,398	20%	4,197	35%	8,393	70%
<b>Total (Lower)</b>	<b>67,111</b>	<b>17%</b>	<b>156,682</b>	<b>39%</b>	<b>181,289</b>	<b>45%</b>
<b>Total (Upper)</b>	<b>172,230</b>	<b>27%</b>	<b>297,307</b>	<b>47%</b>	<b>328,409</b>	<b>52%</b>

**Figure A15: Comparison of Recycling Rates, by Source (for 2009, 2014 and 2025)**



## Appendix B – Detailed Analysis by Local Authority

## Aberdeen City Council

## Summary of plastic waste arisings in Aberdeen City Council

Household		Tonnes
	Carrier bags	1,077
	Bin bags	726
	Plastic packaging film	1,612
	Other plastic film	369
	<b>Total plastic film</b>	<b>3,783</b>
	1. PET drink bottles	1,259
	1. Other PET packaging	640
	2. HDPE drink bottles	745
	2. Other HDPE	415
	3. PVC	46
	5. PP	1,102
	6. PS	393
	7. EPS	221
	Other dense plastic packaging	1,665
	Other dense plastic	2,236
	<b>Total Dense Plastic</b>	<b>8,722</b>
	<b>Sub total households</b>	<b>12,506</b>
C&I		Tonnes
	LOWER ESTIMATE	4,162
	UPPER ESTIMATE	23,285
	<i>Industrial mainly dense plastic</i>	
	<i>Commercial mainly plastic film</i>	
C&D		Tonnes
	PVC	359
	EPS/XPS/PU (Insulation)	137
	HDPE/LDPE	137
	Other	130
	<b>Sub total C&amp;D</b>	<b>763</b>
Agriculture		Tonnes
	LDPE (Film)	5
	PP (Bale/Twine)	1
	HDPE (Netwrap)	0
	HDPE (Liquid containers)	0
	Silage Cores (mixed)	0
	Plastic oil drums	0
	<b>Sub total Agriculture</b>	<b>6</b>
WEEE		Tonnes
	Dense Plastic	1,591
	<b>Sub total WEEE</b>	<b>1,591</b>
ELV		Tonnes
	PP	278
	PU	85
	PE	42
	ABS	24
	Other	42
	<b>Sub total ELV</b>	<b>472</b>
<b>TOTAL</b>	<b>LOWER ESTIMATE</b>	<b>19,500</b>
	<b>UPPER ESTIMATE</b>	<b>38,623</b>

Figure B1: Aberdeen City Council – Estimated Plastic Arisings

SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	12,506	673	5.4%
C&I (LOWER)	4,162	1,873	45.0%
C&I (UPPER)	23,285	10,478	45.0%
C&D	763	137	18.0%
Agriculture	6	1	20.0%
WEEE	1,591	493	31.0%
ELV	472	94	20.0%
<b>Total (LOWER)</b>	<b>19,500</b>	<b>3,272</b>	<b>16.8%</b>
<b>Total (UPPER)</b>	<b>38,623</b>	<b>11,878</b>	<b>30.8%</b>

Figure B2: Aberdeen City Council – Summary of Plastic Arisings

**Local Authority Household Collection**

*(This information is based on discussions with the recycling/waste management officer in the Local Authority and 2011 Waste Data Flow returns for plastic waste)*

Aberdeen City Council collects plastic bottles in source segregated waste collections from households. It also accepts plastic for recycling at CA Sites (segregated) and at other bring sites (comingled). The material is sent to Valpak Recycling for onward processing as shown here.



Figure B3: Aberdeen City Council – Destination of Collected Materials

Aberdeen City Council does not offer trade waste collections within the Local Authority area.

## Aberdeenshire Council

## Summary of plastic waste arisings in Aberdeenshire Council

Household		Tonnes
	Carrier bags	1,340
	Bin bags	836
	Plastic packaging film	2,049
	Other plastic film	393
	<b>Total plastic film</b>	<b>4,618</b>
	1. PET drink bottles	1,721
	1. Other PET packaging	816
	2. HDPE drink bottles	1,037
	2. Other HDPE	494
	3. PVC	62
	5. PP	1,384
	6. PS	494
	7. EPS	242
	Other dense plastic packaging	2,107
	Other dense plastic	1,975
	<b>Total Dense Plastic</b>	<b>10,332</b>
	<b>Sub total households</b>	<b>14,950</b>
C&I		Tonnes
	LOWER ESTIMATE	<b>2,108</b>
	UPPER ESTIMATE	<b>11,795</b>
	<i>Industrial mainly dense plastic</i>	
	<i>Commercial mainly plastic film</i>	
C&D		Tonnes
	PVC	727
	EPS/XPS/PU (Insulation)	278
	HDPE/LDPE	278
	Other	263
	<b>Sub total C&amp;D</b>	<b>1,546</b>
Agriculture		Tonnes
	LDPE (Film)	2,246
	PP (Bale/Twine)	254
	HDPE (Netwrap)	147
	HDPE (Liquid containers)	36
	Silage Cores (mixed)	16
	Plastic oil drums	13
	<b>Sub total Agriculture</b>	<b>2,711</b>
WEEE		Tonnes
	Dense Plastic	1,327
	<b>Sub total WEEE</b>	<b>1,327</b>
ELV		Tonnes
	PP	450
	PU	137
	PE	69
	ABS	38
	Other	69
	<b>Sub total ELV</b>	<b>762</b>
<b>TOTAL</b>	<b>LOWER ESTIMATE</b>	<b>23,405</b>
	<b>UPPER ESTIMATE</b>	<b>33,091</b>

Figure B4: Aberdeenshire Council – Estimated Plastic Arisings

SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	14,950	1164	7.8%
C&I (LOWER)	2,108	949	45.0%
C&I (UPPER)	11,795	5,308	45.0%
C&D	1,546	278	18.0%
Agriculture	2,711	542	20.0%
WEEE	1,327	411	31.0%
ELV	762	152	20.0%
<b>Total (LOWER)</b>	<b>23,405</b>	<b>3,497</b>	<b>14.9%</b>
<b>Total (UPPER)</b>	<b>33,091</b>	<b>7,856</b>	<b>23.7%</b>

**Figure B5: Aberdeenshire Council – Summary of Plastic Arisings**

#### Local Authority Household Collection

*(This information is based on discussions with the recycling/waste management officer in the Local Authority and 2011 Waste Data Flow returns for plastic waste)*

Aberdeenshire Council collects plastic bottles in source segregated waste collections from households. It also accepts plastic for recycling at CA sites (segregated) and at other bring sites (segregated). The material is sent directly to a UK reprocessor.



**Figure B6: Aberdeenshire Council – Destination of Collected Plastics**

Aberdeenshire Council also offers a segregated trade waste collection service for both bottles and plastic film.

## Angus Council

## Summary of plastic waste arisings in Angus Council

Household		Tonnes
	Carrier bags	442
	Bin bags	360
	Plastic packaging film	654
	Other plastic film	181
	<b>Total plastic film</b>	<b>1,638</b>
	1. PET drink bottles	704
	1. Other PET packaging	238
	2. HDPE drink bottles	347
	2. Other HDPE	172
	3. PVC	19
	5. PP	455
	6. PS	165
	7. EPS	120
	Other dense plastic packaging	674
	Other dense plastic	1,294
	<b>Total Dense Plastic</b>	<b>4,186</b>
	<i>Sub total households</i>	<i>5,824</i>
C&I		Tonnes
	LOWER ESTIMATE	739
	UPPER ESTIMATE	4,135
	<i>Industrial mainly dense plastic</i>	
	<i>Commercial mainly plastic film</i>	
C&D		Tonnes
	PVC	1,594
	EPS/XPS/PU (Insulation)	610
	HDPE/LDPE	610
	Other	577
	<i>Sub total C&amp;D</i>	<i>3,391</i>
Agriculture		Tonnes
	LDPE (Film)	336
	PP (Bale/Twine)	38
	HDPE (Netwrap)	22
	HDPE (Liquid containers)	5
	Silage Cores (mixed)	2
	Plastic oil drums	2
	<i>Sub total Agriculture</i>	<i>406</i>
WEEE		Tonnes
	Dense Plastic	614
	<i>Sub total WEEE</i>	<i>614</i>
ELV		Tonnes
	PP	178
	PU	54
	PE	27
	ABS	15
	Other	27
	<i>Sub total ELV</i>	<i>303</i>
<b>TOTAL</b>	<b>LOWER ESTIMATE</b>	<b>11,276</b>
	<b>UPPER ESTIMATE</b>	<b>14,671</b>

Figure B7: Angus Council – Estimated Plastic Arisings

SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	5,824	459	7.9%
C&I (LOWER)	739	333	45.0%
C&I (UPPER)	4,135	1,861	45.0%
C&D	3,391	610	18.0%
Agriculture	406	81	20.0%
WEEE	614	190	31.0%
ELV	303	61	20.0%
<b>Total (LOWER)</b>	<b>11,276</b>	<b>1,734</b>	<b>15.4%</b>
<b>Total (UPPER)</b>	<b>14,671</b>	<b>3,262</b>	<b>22.2%</b>

**Figure B8: Angus Council – Summary of Plastic Arisings**

### Local Authority Household Collection

*(This information is based on discussions with the recycling/waste management officer in the Local Authority and 2011 Waste Data Flow returns for plastic waste)*

Angus Council collects plastic bottles, tubs and clean food containers in source segregated waste collections from households. It also accepts plastic for recycling at CA sites (segregated) and at other bring sites (segregated). The material is sent directly to a UK reprocessor.



**Figure B9: Angus Council – Destination of Collected Plastics**

Angus Council also offers both comingled and segregated trade waste collection services in the Local Authority area for plastic bottles, polystyrene, trays and tubs.

## Argyll &amp; Bute Council

## Summary of plastic waste arisings in Argyll &amp; Bute Council

Household		Tonnes
	Carrier bags	411
	Bin bags	295
	Plastic packaging film	609
	Other plastic film	159
	<b>Total plastic film</b>	<b>1,473</b>
	1. PET drink bottles	469
	1. Other PET packaging	238
	2. HDPE drink bottles	276
	2. Other HDPE	165
	3. PVC	17
	5. PP	420
	6. PS	150
	7. EPS	94
	Other dense plastic packaging	632
	Other dense plastic	1,076
	<b>Total Dense Plastic</b>	<b>3,537</b>
	<i>Sub total households</i>	<b>5,010</b>
C&I		Tonnes
	LOWER ESTIMATE	699
	UPPER ESTIMATE	3,910
	<i>Industrial mainly dense plastic</i>	
	<i>Commercial mainly plastic film</i>	
C&D		Tonnes
	PVC	44
	EPS/XPS/PU (Insulation)	17
	HDPE/LDPE	17
	Other	16
	<i>Sub total C&amp;D</i>	<b>93</b>
Agriculture		Tonnes
	LDPE (Film)	732
	PP (Bale/Twine)	83
	HDPE (Netwrap)	48
	HDPE (Liquid containers)	12
	Silage Cores (mixed)	5
	Plastic oil drums	4
	<i>Sub total Agriculture</i>	<b>883</b>
WEEE		Tonnes
	Dense Plastic	517
	<i>Sub total WEEE</i>	<b>517</b>
ELV		Tonnes
	PP	136
	PU	42
	PE	21
	ABS	12
	Other	21
	<i>Sub total ELV</i>	<b>231</b>
<b>TOTAL</b>	<b>LOWER ESTIMATE</b>	<b>7,433</b>
	<b>UPPER ESTIMATE</b>	<b>10,644</b>

Figure B10: Argyll and Bute Council – Estimated Plastic Arisings



SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	5,010	240	4.8%
C&I (LOWER)	699	315	45.0%
C&I (UPPER)	3,910	1,760	45.0%
C&D	93	17	18.0%
Agriculture	883	177	20.0%
WEEE	517	160	31.0%
ELV	231	46	20.0%
<b>Total (LOWER)</b>	<b>7,433</b>	<b>954</b>	<b>12.8%</b>
<b>Total (UPPER)</b>	<b>10,644</b>	<b>2,399</b>	<b>22.5%</b>

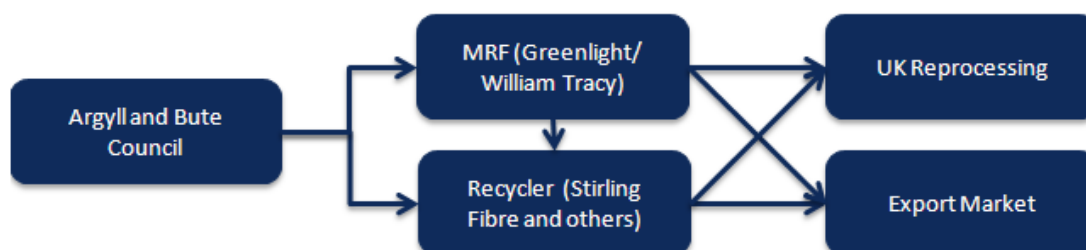
**Figure B11: Argyll and Bute Council – Summary of Plastic Arisings**

Note that Argyll & Bute does not have an ELV ATF so the arisings shown is likely to occur in surrounding Local Authority areas.

**Local Authority Household Collection**

*(This information is based on discussions with the recycling/waste management officer in the Local Authority and 2011 Waste Data Flow returns for plastic waste)*

Argyll & Bute Council collects plastic bottles, pots, trays and tubs in both comingled and source segregated waste collections from households. It also accepts plastic for recycling at CA sites and at other bring sites in both comingled and segregated form. The material is either sent to select MRFs for onward sale to a recycler or reprocessor or is sent direct to a recycler such as Stirling Fibre (now SAICA). End markets for the material will be either UK reprocessors or export markets depending on the best price available for the quality of material collected.



**Figure B12: Argyll and Bute Council – Destination of Collected Plastics**

Argyll and Bute Council also offers both comingled and segregated trade waste collection services in the Local Authority area for plastic bottles, pots, trays and tubs.

## Clackmannanshire Council

## Summary of plastic waste arisings in Clackmannanshire Council

Household		Tonnes
	Carrier bags	185
	Bin bags	132
	Plastic packaging film	299
	Other plastic film	71
	<b>Total plastic film</b>	<b>687</b>
	1. PET drink bottles	325
	1. Other PET packaging	108
	2. HDPE drink bottles	209
	2. Other HDPE	74
	3. PVC	11
	5. PP	202
	6. PS	75
	7. EPS	42
	Other dense plastic packaging	311
	Other dense plastic	473
	<b>Total Dense Plastic</b>	<b>1,828</b>
	<i>Sub total households</i>	<b>2,515</b>
C&I		Tonnes
	LOWER ESTIMATE	<b>301</b>
	UPPER ESTIMATE	<b>1,683</b>
	<i>Industrial mainly dense plastic</i>	
	<i>Commercial mainly plastic film</i>	
C&D		Tonnes
	PVC	0
	EPS/XPS/PU (Insulation)	0
	HDPE/LDPE	0
	Other	0
	<i>Sub total C&amp;D</i>	<b>0</b>
Agriculture		Tonnes
	LDPE (Film)	38
	PP (Bale/Twine)	4
	HDPE (Netwrap)	3
	HDPE (Liquid containers)	1
	Silage Cores (mixed)	0
	Plastic oil drums	0
	<i>Sub total Agriculture</i>	<b>46</b>
WEEE		Tonnes
	Dense Plastic	274
	<i>Sub total WEEE</i>	<b>274</b>
ELV		Tonnes
	PP	71
	PU	22
	PE	11
	ABS	6
	Other	11
	<i>Sub total ELV</i>	<b>120</b>
<b>TOTAL</b>	<b>LOWER ESTIMATE</b>	<b>3,257</b>
	<b>UPPER ESTIMATE</b>	<b>4,639</b>

Figure B13: Clackmannanshire Council – Estimated Plastic Arisings

SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	2,515	377	15.0%
C&I (LOWER)	301	135	45.0%
C&I (UPPER)	1,683	757	45.0%
C&D	0	0	0.0%
Agriculture	46	9	20.0%
WEEE	274	85	31.0%
ELV	120	24	20.0%
<b>Total (LOWER)</b>	<b>3,257</b>	<b>631</b>	<b>19.4%</b>
<b>Total (UPPER)</b>	<b>4,639</b>	<b>1,253</b>	<b>27.0%</b>

Figure B14: Clackmannanshire Council – Summary of Plastic Arisings

### Local Authority Household Collection

*(This information is based on discussions with the recycling/waste management officer in the Local Authority and 2011 Waste Data Flow returns for plastic waste)*

Clackmannanshire Council collects plastic bottles, pots, trays and tubs in comingled waste collections from households. It also accepts plastic for recycling at CA sites (comingled) and at other bring sites (comingled). The material is either sent to a MRF for onward sale to a recycler or reprocessor or is sent to a local waste transfer station (Alloa Community Enterprise). End markets for the material will be either UK reprocessors or export markets depending on the best price available for the quality of material collected.



Figure B15: Clackmannanshire Council – Destination of Collected Plastics

Clackmannanshire Council also offers comingled trade waste collection services in the Local Authority area for plastic bottles, pots, trays and tubs.

## Dumfries and Galloway Council

## Summary of plastic waste arisings in Dumfries Council

Household		Tonnes
	Carrier bags	834
	Bin bags	624
	Plastic packaging film	1,181
	Other plastic film	312
	<b>Total plastic film</b>	<b>2,951</b>
	1. PET drink bottles	893
	1. Other PET packaging	471
	2. HDPE drink bottles	410
	2. Other HDPE	321
	3. PVC	29
	5. PP	825
	6. PS	290
	7. EPS	200
	Other dense plastic packaging	1,215
	Other dense plastic	2,062
	<b>Total Dense Plastic</b>	<b>6,715</b>
	<b>Sub total households</b>	<b>9,666</b>
C&I		Tonnes
	LOWER ESTIMATE	1,174
	UPPER ESTIMATE	6,570
	<i>Industrial mainly dense plastic</i>	
	<i>Commercial mainly plastic film</i>	
C&D		Tonnes
	PVC	69
	EPS/XPS/PU (Insulation)	26
	HDPE/LDPE	26
	Other	25
	<b>Sub total C&amp;D</b>	<b>147</b>
Agriculture		Tonnes
	LDPE (Film)	1,925
	PP (Bale/Twine)	218
	HDPE (Netwrap)	126
	HDPE (Liquid containers)	30
	Silage Cores (mixed)	13
	Plastic oil drums	11
	<b>Sub total Agriculture</b>	<b>2,323</b>
WEEE		Tonnes
	Dense Plastic	853
	<b>Sub total WEEE</b>	<b>853</b>
ELV		Tonnes
	PP	249
	PU	76
	PE	38
	ABS	21
	Other	38
	<b>Sub total ELV</b>	<b>421</b>
<b>TOTAL</b>	<b>LOWER ESTIMATE</b>	<b>14,585</b>
	<b>UPPER ESTIMATE</b>	<b>19,981</b>

Figure B16: Dumfries and Galloway Council – Estimated Plastic Arisings

SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	9,666	38	0.4%
C&I (LOWER)	1,174	528	45.0%
C&I (UPPER)	6,570	2,957	45.0%
C&D	147	26	18.0%
Agriculture	2,323	465	20.0%
WEEE	853	264	31.0%
ELV	421	84	20.0%
<b>Total (LOWER)</b>	<b>14,585</b>	<b>1,406</b>	<b>9.6%</b>
<b>Total (UPPER)</b>	<b>19,981</b>	<b>3,835</b>	<b>19.2%</b>

**Figure B17: Dumfries and Galloway Council – Summary of Plastic Arisings**

**Local Authority Household Collection**

*(This information is based on discussions with the recycling/waste management officer in the Local Authority and 2011 Waste Data Flow returns for plastic waste)*

Dumfries and Galloway Council collects plastic bottles in comingled waste collections from households. It also accepts plastic for recycling at CA sites (comingled). The material is sent to a local facility for sorting and onward sale to either UK reprocessors or export markets depending on the best price available for the quality of material collected.



**Figure B18: Dumfries and Galloway Council – Destination of Collected Plastics**

Dumfries and Galloway Council does not offer trade waste collections in the Local Authority area.

**Dundee City Council****Summary of plastic waste arisings in Dundee City Council**

<b>Household</b>		<b>Tonnes</b>
Carrier bags		597
Bin bags		440
Plastic packaging film		859
Other plastic film		212
<b>Total plastic film</b>		<b>2,108</b>
1. PET drink bottles		727
1. Other PET packaging		338
2. HDPE drink bottles		344
2. Other HDPE		224
3. PVC		22
5. PP		596
6. PS		211
7. EPS		139
Other dense plastic packaging		882
Other dense plastic		1,341
<b>Total Dense Plastic</b>		<b>4,824</b>
<i>Sub total households</i>		<b>6,932</b>
<b>C&amp;I</b>		<b>Tonnes</b>
LOWER ESTIMATE		<b>1,481</b>
UPPER ESTIMATE		<b>8,285</b>
<i>Industrial mainly dense plastic</i>		
<i>Commercial mainly plastic film</i>		
<b>C&amp;D</b>		<b>Tonnes</b>
PVC		292
EPS/XPS/PU (Insulation)		112
HDPE/LDPE		112
Other		105
<i>Sub total C&amp;D</i>		<b>621</b>
<b>Agriculture</b>		<b>Tonnes</b>
LDPE (Film)		0
PP (Bale/Twine)		0
HDPE (Netwrap)		0
HDPE (Liquid containers)		0
Silage Cores (mixed)		0
Plastic oil drums		0
<i>Sub total Agriculture</i>		<b>0</b>
<b>WEEE</b>		<b>Tonnes</b>
Dense Plastic		913
<i>Sub total WEEE</i>		<b>913</b>
<b>ELV</b>		<b>Tonnes</b>
PP		152
PU		46
PE		23
ABS		13
Other		23
<i>Sub total ELV</i>		<b>257</b>
<b>TOTAL</b>	<b>LOWER ESTIMATE</b>	<b>10,203</b>
	<b>UPPER ESTIMATE</b>	<b>17,007</b>

**Figure B19: Dundee City Council – Estimated Plastic Arisings**

SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	6,932	190	2.7%
C&I (LOWER)	1,481	666	45.0%
C&I (UPPER)	8,285	3,728	45.0%
C&D	621	112	18.0%
Agriculture	0	0	0.0%
WEEE	913	283	31.0%
ELV	257	51	20.0%
<b>Total (LOWER)</b>	<b>10,203</b>	<b>1,302</b>	<b>12.8%</b>
<b>Total (UPPER)</b>	<b>17,007</b>	<b>4,364</b>	<b>25.7%</b>

Figure B20: Dundee City Council – Summary of Plastic Arisings

### Local Authority Household Collection

*(This information is based on discussions with the recycling/waste management officer in the Local Authority and 2011 Waste Data Flow returns for plastic waste)*

Dundee City Council collects plastic bottles, pots, trays and tubs in source segregated waste collections from households. It also accepts plastic for recycling at CA sites (segregated) and from other bring sites (both comingled and source segregated). The material is sent to recyclers based in Scotland, with the ultimate destination being both UK reprocessors and export markets, depending on the best price available for the quality of material collected.



Figure B21: Dundee City Council – Destination of Collected Plastics

Dundee City Council also offer segregated trade waste collections in the Local Authority area, accepting plastic bottles.

**East Ayrshire Council****Summary of plastic waste arisings in East Ayrshire Council**

<b>Household</b>		<b>Tonnes</b>
Carrier bags		472
Bin bags		354
Plastic packaging film		683
Other plastic film		175
<b>Total plastic film</b>		<b>1,684</b>
1. PET drink bottles		585
1. Other PET packaging		266
2. HDPE drink bottles		283
2. Other HDPE		180
3. PVC		18
5. PP		474
6. PS		168
7. EPS		113
Other dense plastic packaging		702
Other dense plastic		1,146
<b>Total Dense Plastic</b>		<b>3,937</b>
<i>Sub total households</i>		<b>5,620</b>
<b>C&amp;I</b>		<b>Tonnes</b>
LOWER ESTIMATE		<b>733</b>
UPPER ESTIMATE		<b>4,103</b>
<i>Industrial mainly dense plastic</i>		
<i>Commercial mainly plastic film</i>		
<b>C&amp;D</b>		<b>Tonnes</b>
PVC		162
EPS/XPS/PU (Insulation)		62
HDPE/LDPE		62
Other		59
<i>Sub total C&amp;D</i>		<b>344</b>
<b>Agriculture</b>		<b>Tonnes</b>
LDPE (Film)		486
PP (Bale/Twine)		55
HDPE (Netwrap)		32
HDPE (Liquid containers)		8
Silage Cores (mixed)		3
Plastic oil drums		3
<i>Sub total Agriculture</i>		<b>587</b>
<b>WEEE</b>		<b>Tonnes</b>
Dense Plastic		646
<i>Sub total WEEE</i>		<b>646</b>
<b>ELV</b>		<b>Tonnes</b>
PP		165
PU		50
PE		25
ABS		14
Other		25
<i>Sub total ELV</i>		<b>280</b>
<b>TOTAL</b>	<b>LOWER ESTIMATE</b>	<b>8,211</b>
	<b>UPPER ESTIMATE</b>	<b>11,580</b>

**Figure B22: East Ayrshire Council – Estimated Plastic Arisings**



SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	5,620	188	3.3%
C&I (LOWER)	733	330	45.0%
C&I (UPPER)	4,103	1,846	45.0%
C&D	344	62	18.0%
Agriculture	587	117	20.0%
WEEE	646	200	31.0%
ELV	280	56	20.0%
<b>Total (LOWER)</b>	<b>8,211</b>	<b>954</b>	<b>11.6%</b>
<b>Total (UPPER)</b>	<b>11,580</b>	<b>2,470</b>	<b>21.3%</b>

**Figure B23: East Ayrshire Council – Summary of Plastic Arisings**

### Local Authority Household Collection

*(This information is based on discussions with the recycling/waste management officer in the Local Authority and 2011 Waste Data Flow returns for plastic waste)*

East Ayrshire Council collects plastic bottles, pots, trays and tubs in both source segregated and comingled waste collections from households. It also accepts plastic for recycling at CA sites (segregated) and from other bring sites (segregated). The material is sent to the council's own MRF and then sold on for the best price to local waste management companies/recyclers. It is assumed that the ultimate destination for the material will be both UK reprocessors and export markets, depending on the best price available for the quality of material collected.



**Figure B24: East Ayrshire Council – Destination of Collected Plastics**

East Ayrshire Council also offer segregated trade waste collections in the Local Authority area, accepting plastic bottles and trays.

**East Dunbartonshire Council****Summary of plastic waste arisings in East Dunbartonshire Council**

<b>Household</b>		<b>Tonnes</b>
Carrier bags		594
Bin bags		371
Plastic packaging film		900
Other plastic film		174
<b>Total plastic film</b>		<b>2,039</b>
1. PET drink bottles		724
1. Other PET packaging		362
2. HDPE drink bottles		431
2. Other HDPE		219
3. PVC		27
5. PP		609
6. PS		216
7. EPS		107
Other dense plastic packaging		925
Other dense plastic		875
<b>Total Dense Plastic</b>		<b>4,496</b>
<b>Sub total households</b>		<b>6,534</b>
<b>C&amp;I</b>		<b>Tonnes</b>
LOWER ESTIMATE		516
UPPER ESTIMATE		2,885
<i>Industrial mainly dense plastic</i>		
<i>Commercial mainly plastic film</i>		
<b>C&amp;D</b>		<b>Tonnes</b>
PVC		31
EPS/XPS/PU (Insulation)		12
HDPE/LDPE		12
Other		11
<b>Sub total C&amp;D</b>		<b>66</b>
<b>Agriculture</b>		<b>Tonnes</b>
LDPE (Film)		40
PP (Bale/Twine)		4
HDPE (Netwrap)		3
HDPE (Liquid containers)		1
Silage Cores (mixed)		0
Plastic oil drums		0
<b>Sub total Agriculture</b>		<b>48</b>
<b>WEEE</b>		<b>Tonnes</b>
Dense Plastic		509
<b>Sub total WEEE</b>		<b>509</b>
<b>ELV</b>		<b>Tonnes</b>
PP		149
PU		45
PE		23
ABS		13
Other		23
<b>Sub total ELV</b>		<b>252</b>
<b>TOTAL</b>	<b>LOWER ESTIMATE</b>	<b>7,925</b>
	<b>UPPER ESTIMATE</b>	<b>10,294</b>

Figure B25: East Dunbartonshire Council – Estimated Plastic Arisings

SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	6,534	425	6.5%
C&I (LOWER)	516	232	45.0%
C&I (UPPER)	2,885	1,298	45.0%
C&D	66	12	18.0%
Agriculture	48	10	20.0%
WEEE	509	158	31.0%
ELV	252	50	20.0%
<b>Total (LOWER)</b>	<b>7,925</b>	<b>887</b>	<b>11.2%</b>
<b>Total (UPPER)</b>	<b>10,294</b>	<b>1,953</b>	<b>19.0%</b>

Figure B26: East Dunbartonshire Council – Summary of Plastic Arisings

**Local Authority Household Collection**

*(This information is based on discussions with the recycling/waste management officer in the Local Authority and 2011 Waste Data Flow returns for plastic waste)*

East Dunbartonshire Council collects plastic bottles in source segregated waste collections from households. It also accepts plastic for recycling at CA sites (segregated) and from other bring sites (segregated). The waste plastic is sent to a MRF and then on to Stirling Fibre (now SAICA). It is assumed that the ultimate destination for the material will be both UK reprocessors and export markets, depending on the best price available for the quality of material collected.

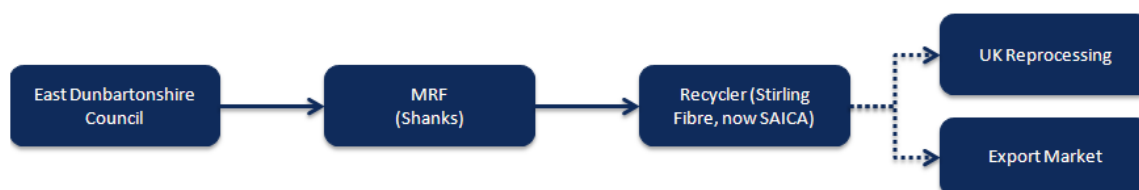


Figure B27: East Dunbartonshire Council – Destination of Collected Plastics

East Dunbartonshire Council does not offer trade waste collections in the Local Authority area.

**East Lothian Council****Summary of plastic waste arisings in East Lothian Council**

<b>Household</b>		<b>Tonnes</b>
Carrier bags		474
Bin bags		311
Plastic packaging film		726
Other plastic film		154
<b>Total plastic film</b>		<b>1,665</b>
1. PET drink bottles		629
1. Other PET packaging		284
2. HDPE drink bottles		382
2. Other HDPE		180
3. PVC		22
5. PP		492
6. PS		177
7. EPS		93
Other dense plastic packaging		749
Other dense plastic		885
<b>Total Dense Plastic</b>		<b>3,893</b>
<i>Sub total households</i>		<b>5,558</b>
<b>C&amp;I</b>		<b>Tonnes</b>
LOWER ESTIMATE		<b>547</b>
UPPER ESTIMATE		<b>3,061</b>
<i>Industrial mainly dense plastic</i>		
<i>Commercial mainly plastic film</i>		
<b>C&amp;D</b>		<b>Tonnes</b>
PVC		1,084
EPS/XPS/PU (Insulation)		415
HDPE/LDPE		415
Other		392
<i>Sub total C&amp;D</i>		<b>2,306</b>
<b>Agriculture</b>		<b>Tonnes</b>
LDPE (Film)		360
PP (Bale/Twine)		41
HDPE (Netwrap)		24
HDPE (Liquid containers)		6
Silage Cores (mixed)		3
Plastic oil drums		2
<i>Sub total Agriculture</i>		<b>434</b>
<b>WEEE</b>		<b>Tonnes</b>
Dense Plastic		508
<i>Sub total WEEE</i>		<b>508</b>
<b>ELV</b>		<b>Tonnes</b>
PP		141
PU		43
PE		21
ABS		12
Other		21
<i>Sub total ELV</i>		<b>238</b>
<b>TOTAL</b>	<b>LOWER ESTIMATE</b>	<b>9,592</b>
	<b>UPPER ESTIMATE</b>	<b>12,106</b>

Figure B28: East Lothian Council – Estimated Plastic Arisings

SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	5,558	468	8.4%
C&I (LOWER)	547	246	45.0%
C&I (UPPER)	3,061	1,377	45.0%
C&D	2,306	415	18.0%
Agriculture	434	87	20.0%
WEEE	508	157	31.0%
ELV	238	48	20.0%
<b>Total (LOWER)</b>	<b>9,592</b>	<b>1,421</b>	<b>14.8%</b>
<b>Total (UPPER)</b>	<b>12,106</b>	<b>2,552</b>	<b>21.1%</b>

Figure B29: East Lothian Council – Summary of Plastic Arisings

**Local Authority Household Collection**

*(This information is based on discussions with the recycling/waste management officer in the Local Authority and 2011 Waste Data Flow returns for plastic waste)*

East Lothian Council collects plastic bottles and tubs in both source segregated and comingled waste collections from households. It also accepts plastic for recycling at CA sites (segregated). Plastic bottles are sent for sorting to Lowmac Alloys and then sent to Redcar for reprocessing and manufacture into new products. Other plastics are taken to a MRF for onward sale to what is assumed to be both the export market and UK reprocessors.

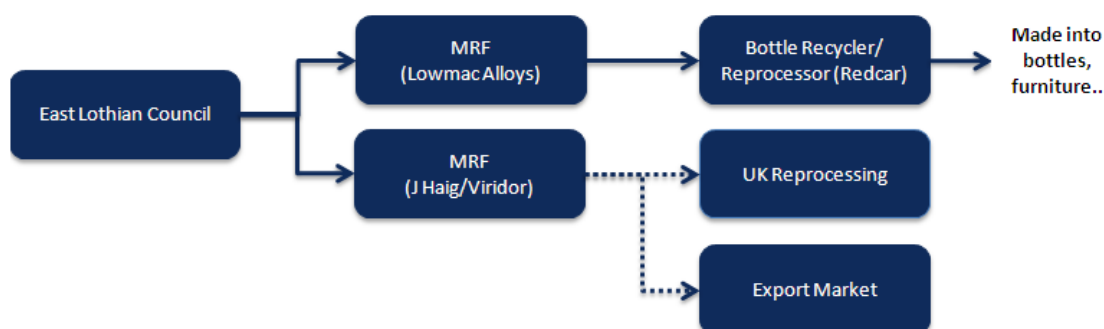


Figure B30: East Lothian Council – Destination of Collected Plastics

East Lothian Council does not offer trade waste collections in the Local Authority area.

**East Renfrewshire Council**
**Summary of plastic waste arisings in East Renfrewshire Council**

<b>Household</b>		<b>Tonnes</b>
	Carrier bags	331
	Bin bags	228
	Plastic packaging film	508
	Other plastic film	114
	<b>Total plastic film</b>	<b>1,181</b>
	1. PET drink bottles	472
	1. Other PET packaging	195
	2. HDPE drink bottles	281
	2. Other HDPE	127
	3. PVC	16
	5. PP	346
	6. PS	125
	7. EPS	70
	Other dense plastic packaging	525
	Other dense plastic	698
	<b>Total Dense Plastic</b>	<b>2,854</b>
	<i>Sub total households</i>	<b>4,034</b>
<b>C&amp;I</b>		<b>Tonnes</b>
	LOWER ESTIMATE	<b>404</b>
	UPPER ESTIMATE	<b>2,260</b>
	<i>Industrial mainly dense plastic</i>	
	<i>Commercial mainly plastic film</i>	
<b>C&amp;D</b>		<b>Tonnes</b>
	PVC	168
	EPS/XPS/PU (Insulation)	64
	HDPE/LDPE	64
	Other	61
	<i>Sub total C&amp;D</i>	<b>357</b>
<b>Agriculture</b>		<b>Tonnes</b>
	LDPE (Film)	17
	PP (Bale/Twine)	2
	HDPE (Netwrap)	1
	HDPE (Liquid containers)	0
	Silage Cores (mixed)	0
	Plastic oil drums	0
	<i>Sub total Agriculture</i>	<b>20</b>
<b>WEEE</b>		<b>Tonnes</b>
	Dense Plastic	422
	<i>Sub total WEEE</i>	<b>422</b>
<b>ELV</b>		<b>Tonnes</b>
	PP	124
	PU	38
	PE	19
	ABS	10
	Other	19
	<i>Sub total ELV</i>	<b>209</b>
<b>TOTAL</b>	<b>LOWER ESTIMATE</b>	<b>5,447</b>
	<b>UPPER ESTIMATE</b>	<b>7,302</b>

**Figure B31: East Renfrewshire Council – Estimated Plastic Arisings**

SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	4,034	378	9.4%
C&I (LOWER)	404	182	45.0%
C&I (UPPER)	2,260	1,017	45.0%
C&D	357	64	18.0%
Agriculture	20	4	20.0%
WEEE	422	131	31.0%
ELV	209	42	20.0%
<b>Total (LOWER)</b>	<b>5,447</b>	<b>801</b>	<b>14.7%</b>
<b>Total (UPPER)</b>	<b>7,302</b>	<b>1,636</b>	<b>22.4%</b>

Figure B32: East Renfrewshire Council – Summary of Plastic Arisings

**Local Authority Household Collection**

*(This information is based on discussions with the recycling/waste management officer in the Local Authority and 2011 Waste Data Flow returns for plastic waste)*

East Renfrewshire Council collects plastic bottles, pots and tubs in source segregated waste collections from households. It also accepts plastic for recycling at CA sites (comingled) and other bring sites (comingled). The material is sent for sorting to Lowmac Alloys or Wm Tracey where it is assumed to go for onward sale to both the export market and UK reprocessors, whichever can offer the best price.

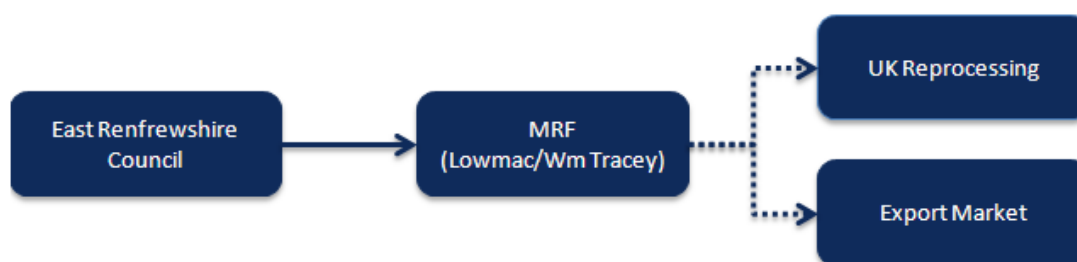


Figure B33: East Renfrewshire Council – Destination of Collected Plastics

East Renfrewshire Council offers segregated trade waste collections in the Local Authority area and accepts plastic bottles, pots and tubs.

**City of Edinburgh Council****Summary of plastic waste arisings in City of Edinburgh Council**

<b>Household</b>		<b>Tonnes</b>
	Carrier bags	1,575
	Bin bags	1,098
	Plastic packaging film	2,259
	Other plastic film	459
	<b>Total plastic film</b>	<b>5,392</b>
	1. PET drink bottles	2,035
	1. Other PET packaging	903
	2. HDPE drink bottles	867
	2. Other HDPE	546
	3. PVC	57
	5. PP	1,556
	6. PS	545
	7. EPS	332
	Other dense plastic packaging	2,293
	Other dense plastic	2,325
	<b>Total Dense Plastic</b>	<b>11,460</b>
	<i>Sub total households</i>	<b>16,852</b>
<b>C&amp;I</b>		<b>Tonnes</b>
	LOWER ESTIMATE	<b>6,313</b>
	UPPER ESTIMATE	<b>35,320</b>
	<i>Industrial mainly dense plastic</i>	
	<i>Commercial mainly plastic film</i>	
<b>C&amp;D</b>		<b>Tonnes</b>
	PVC	1,022
	EPS/XPS/PU (Insulation)	391
	HDPE/LDPE	391
	Other	370
	<i>Sub total C&amp;D</i>	<b>2,174</b>
<b>Agriculture</b>		<b>Tonnes</b>
	LDPE (Film)	6
	PP (Bale/Twine)	1
	HDPE (Netwrap)	0
	HDPE (Liquid containers)	0
	Silage Cores (mixed)	0
	Plastic oil drums	0
	<i>Sub total Agriculture</i>	<b>7</b>
<b>WEEE</b>		<b>Tonnes</b>
	Dense Plastic	3,055
	<i>Sub total WEEE</i>	<b>3,055</b>
<b>ELV</b>		<b>Tonnes</b>
	PP	476
	PU	145
	PE	73
	ABS	40
	Other	73
	<i>Sub total ELV</i>	<b>807</b>
<b>TOTAL</b>		<b>Tonnes</b>
	LOWER ESTIMATE	<b>29,208</b>
	UPPER ESTIMATE	<b>58,215</b>

Figure B34: City of Edinburgh Council – Estimated Plastic Arisings



SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	16,852	378	2.2%
C&I (LOWER)	6,313	2,841	45.0%
C&I (UPPER)	35,320	15,894	45.0%
C&D	2,174	391	18.0%
Agriculture	7	1	20.0%
WEEE	3,055	947	31.0%
ELV	807	161	20.0%
<b>Total (LOWER)</b>	<b>29,208</b>	<b>4,720</b>	<b>16.2%</b>
<b>Total (UPPER)</b>	<b>58,215</b>	<b>17,773</b>	<b>30.5%</b>

Figure B35: City of Edinburgh Council – Summary of Plastic Arisings

**Local Authority Household Collection**

*(This information is based on discussions with the recycling/waste management officer in the Local Authority and 2011 Waste Data Flow returns for plastic waste)*

City of Edinburgh Council collects plastic bottles only through both comingled and source segregated waste collections from households. It also accepts plastic for recycling at CA sites (comingled) and other bring sites (comingled). The material is sent to Shanks where it sorted for onward sale to both the export market and UK reprocessors, whichever can offer the best price.



Figure B36: City of Edinburgh Council – Destination of Collected Plastics

City of Edinburgh Council offers comingled trade waste collections in the Local Authority area and accepts plastic bottles and other dense plastics such as shampoo bottles.

**Eilean Siar**
**Summary of plastic waste arisings in Eilean Siar**

Household		Tonnes
Carrier bags		110
Bin bags		80
Plastic packaging film		164
Other plastic film		32
<b>Total plastic film</b>		<b>386</b>
1. PET drink bottles		188
1. Other PET packaging		62
2. HDPE drink bottles		85
2. Other HDPE		37
3. PVC		5
5. PP		112
6. PS		40
7. EPS		24
Other dense plastic packaging		166
Other dense plastic		159
<b>Total Dense Plastic</b>		<b>879</b>
<b>Sub total households</b>		<b>1,265</b>
C&I		Tonnes
LOWER ESTIMATE		203
UPPER ESTIMATE		1,138
<i>Industrial mainly dense plastic</i>		
<i>Commercial mainly plastic film</i>		
C&D		Tonnes
PVC		22
EPS/XPS/PU (Insulation)		9
HDPE/LDPE		9
Other		8
<b>Sub total C&amp;D</b>		<b>47</b>
Agriculture		Tonnes
LDPE (Film)		1,210
PP (Bale/Twine)		137
HDPE (Netwrap)		79
HDPE (Liquid containers)		19
Silage Cores (mixed)		8
Plastic oil drums		7
<b>Sub total Agriculture</b>		<b>1,461</b>
WEEE		Tonnes
Dense Plastic		149
<b>Sub total WEEE</b>		<b>149</b>
ELV		Tonnes
PP		44
PU		14
PE		7
ABS		4
Other		7
<b>Sub total ELV</b>		<b>75</b>
<b>TOTAL</b>	<b>LOWER ESTIMATE</b>	<b>3,200</b>
	<b>UPPER ESTIMATE</b>	<b>4,134</b>

Figure B37: Eilean Siar Council – Estimated Plastic Arisings

SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	1,265	107	8.5%
C&I (LOWER)	203	92	45.0%
C&I (UPPER)	1,138	512	45.0%
C&D	47	9	18.0%
Agriculture	1,461	292	20.0%
WEEE	149	46	31.0%
ELV	75	15	20.0%
<b>Total (LOWER)</b>	<b>3,200</b>	<b>560</b>	<b>17.5%</b>
<b>Total (UPPER)</b>	<b>4,134</b>	<b>981</b>	<b>23.7%</b>

Figure B38: Eilean Siar Council – Summary of Plastic Arisings

**Local Authority Household Collection**

*(This information is based on discussions with the recycling/waste management officer in the Local Authority and 2011 Waste Data Flow returns for plastic waste)*

Eilean Siar collects plastic bottles, film, polystyrene, pots, trays and tubs through both comingled and source segregated waste collections from households. It also accepts plastic for recycling at CA sites (segregated). The material is sent to a MRF and it is assumed that it is then sent for onward sale to both the export market and UK reprocessors, whichever can offer the best price.

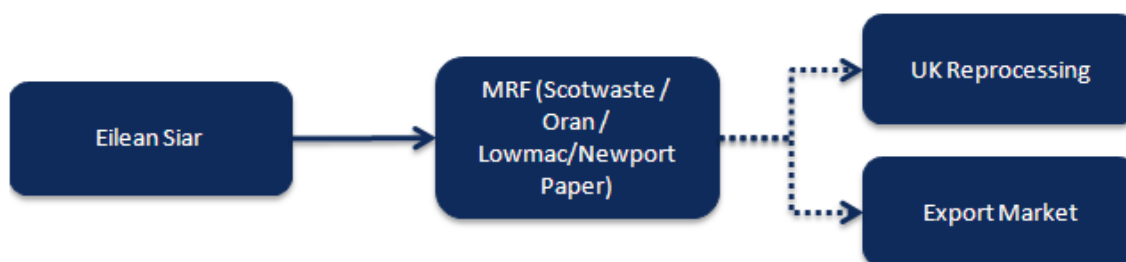


Figure B39: Eilean Siar Council – Destination of Collected Plastics

Eilean Siar Council offers segregated trade waste collections in the Local Authority area and accepts plastic bottles and trays.

**Falkirk Council****Summary of plastic waste arisings in Falkirk Council**

<b>Household</b>		<b>Tonnes</b>
Carrier bags		589
Bin bags		418
Plastic packaging film		935
Other plastic film		195
<b>Total plastic film</b>		<b>2,137</b>
1. PET drink bottles		1,110
1. Other PET packaging		338
2. HDPE drink bottles		632
2. Other HDPE		217
3. PVC		31
5. PP		631
6. PS		232
7. EPS		130
Other dense plastic packaging		962
Other dense plastic		1,154
<b>Total Dense Plastic</b>		<b>5,437</b>
<b>Sub total households</b>		<b>7,574</b>
<b>C&amp;I</b>		<b>Tonnes</b>
LOWER ESTIMATE		<b>1,237</b>
UPPER ESTIMATE		<b>6,923</b>
<i>Industrial mainly dense plastic</i>		
<i>Commercial mainly plastic film</i>		
<b>C&amp;D</b>		<b>Tonnes</b>
PVC		722
EPS/XPS/PU (Insulation)		277
HDPE/LDPE		277
Other		261
<b>Sub total C&amp;D</b>		<b>1,537</b>
<b>Agriculture</b>		<b>Tonnes</b>
LDPE (Film)		59
PP (Bale/Twine)		7
HDPE (Netwrap)		4
HDPE (Liquid containers)		1
Silage Cores (mixed)		0
Plastic oil drums		0
<b>Sub total Agriculture</b>		<b>71</b>
<b>WEEE</b>		<b>Tonnes</b>
Dense Plastic		862
<b>Sub total WEEE</b>		<b>862</b>
<b>ELV</b>		<b>Tonnes</b>
PP		214
PU		65
PE		33
ABS		18
Other		33
<b>Sub total ELV</b>		<b>363</b>
<b>TOTAL</b>	<b>LOWER ESTIMATE</b>	<b>11,644</b>
	<b>UPPER ESTIMATE</b>	<b>17,330</b>

**Figure B40: Falkirk Council – Estimated Plastic Arisings**

SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	7,574	1123	14.8%
C&I (LOWER)	1,237	557	45.0%
C&I (UPPER)	6,923	3,115	45.0%
C&D	1,537	277	18.0%
Agriculture	71	14	20.0%
WEEE	862	267	31.0%
ELV	363	73	20.0%
<b>Total (LOWER)</b>	<b>11,644</b>	<b>2,310</b>	<b>19.8%</b>
<b>Total (UPPER)</b>	<b>17,330</b>	<b>4,869</b>	<b>28.1%</b>

Figure B41: Falkirk Council – Summary of Plastic Arisings

**Local Authority Household Collection**

*(This information is based on discussions with the recycling/waste management officer in the Local Authority and 2011 Waste Data Flow returns for plastic waste)*

Falkirk Council collects plastic bottles, pots, trays and tubs through comingled waste collections from households. It also accepts plastic for recycling at CA sites (comingled and segregated) and other bring sites (comingled). The material is separated and sorted at local MRF and then sold on to both the export market and UK reprocessors, whichever can offer the best price.



Figure B42: Falkirk Council – Destination of Collected Plastics

Falkirk Council offers comingled trade waste collections in the Local Authority area and accepts plastic bottles, pots, trays and tubs.

**Fife Council****Summary of plastic waste arisings in Fife Council**

<b>Household</b>		<b>Tonnes</b>
	Carrier bags	1,340
	Bin bags	1,010
	Plastic packaging film	1,958
	Other plastic film	477
	<b>Total plastic film</b>	<b>4,785</b>
	1. PET drink bottles	1,895
	1. Other PET packaging	748
	2. HDPE drink bottles	899
	2. Other HDPE	498
	3. PVC	53
	5. PP	1,354
	6. PS	483
	7. EPS	322
	Other dense plastic packaging	2,006
	Other dense plastic	3,032
	<b>Total Dense Plastic</b>	<b>11,290</b>
	<i>Sub total households</i>	<i>16,075</i>
<b>C&amp;I</b>		<b>Tonnes</b>
	LOWER ESTIMATE	<b>2,624</b>
	UPPER ESTIMATE	<b>14,679</b>
	<i>Industrial mainly dense plastic</i>	
	<i>Commercial mainly plastic film</i>	
<b>C&amp;D</b>		<b>Tonnes</b>
	PVC	116
	EPS/XPS/PU (Insulation)	45
	HDPE/LDPE	45
	Other	42
	<i>Sub total C&amp;D</i>	<i>247</i>
<b>Agriculture</b>		<b>Tonnes</b>
	LDPE (Film)	854
	PP (Bale/Twine)	97
	HDPE (Netwrap)	56
	HDPE (Liquid containers)	14
	Silage Cores (mixed)	6
	Plastic oil drums	5
	<i>Sub total Agriculture</i>	<i>1,031</i>
<b>WEEE</b>		<b>Tonnes</b>
	Dense Plastic	1,990
	<i>Sub total WEEE</i>	<i>1,990</i>
<b>ELV</b>		<b>Tonnes</b>
	PP	504
	PU	154
	PE	77
	ABS	43
	Other	77
	<i>Sub total ELV</i>	<i>854</i>
<b>TOTAL</b>	<b>LOWER ESTIMATE</b>	<b>22,821</b>
	<b>UPPER ESTIMATE</b>	<b>34,877</b>

**Figure B43: Fife Council – Estimated Plastic Arisings**

SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	16,075	862	5.4%
C&I (LOWER)	2,624	1,181	45.0%
C&I (UPPER)	14,679	6,606	45.0%
C&D	247	45	18.0%
Agriculture	1,031	206	20.0%
WEEE	1,990	617	31.0%
ELV	854	171	20.0%
<b>Total (LOWER)</b>	<b>22,821</b>	<b>3,081</b>	<b>13.5%</b>
<b>Total (UPPER)</b>	<b>34,877</b>	<b>8,506</b>	<b>24.4%</b>

Figure B44: Fife Council – Summary of Plastic Arisings

**Local Authority Household Collection**

*(This information is based on discussions with the recycling/waste management officer in the Local Authority and 2011 Waste Data Flow returns for plastic waste)*

Fife Council collects plastic bottles only through comingled waste collections from households. It also accepts plastic for recycling at CA sites (comingled) and other bring sites (comingled). The material is either separated and sorted at local MRF or sent to a recycler. From here it is assumed that it is then sold on to both the export market and UK reprocessors, whichever can offer the best price.



Figure B45: Fife Council – Destination of Collected Plastics

Fife Council does not offer trade waste collections in the Local Authority area.

**Glasgow City Council****Summary of plastic waste arisings in Glasgow City Council**

<b>Household</b>		<b>Tonnes</b>
Carrier bags		2,559
Bin bags		1,736
Plastic packaging film		3,732
Other plastic film		767
<b>Total plastic film</b>		<b>8,794</b>
1. PET drink bottles		3,200
1. Other PET packaging		1,494
2. HDPE drink bottles		1,542
2. Other HDPE		914
3. PVC		99
5. PP		2,559
6. PS		901
7. EPS		522
Other dense plastic packaging		3,809
Other dense plastic		4,014
<b>Total Dense Plastic</b>		<b>19,054</b>
<b>Sub total households</b>		<b>27,848</b>
<b>C&amp;I</b>		<b>Tonnes</b>
LOWER ESTIMATE		<b>8,639</b>
UPPER ESTIMATE		<b>48,333</b>
<i>Industrial mainly dense plastic</i>		
<i>Commercial mainly plastic film</i>		
<b>C&amp;D</b>		<b>Tonnes</b>
PVC		3,912
EPS/XPS/PU (Insulation)		1,498
HDPE/LDPE		1,498
Other		1,415
<b>Sub total C&amp;D</b>		<b>8,322</b>
<b>Agriculture</b>		<b>Tonnes</b>
LDPE (Film)		0
PP (Bale/Twine)		0
HDPE (Netwrap)		0
HDPE (Liquid containers)		0
Silage Cores (mixed)		0
Plastic oil drums		0
<b>Sub total Agriculture</b>		<b>0</b>
<b>WEEE</b>		<b>Tonnes</b>
Dense Plastic		3,998
<b>Sub total WEEE</b>		<b>3,998</b>
<b>ELV</b>		<b>Tonnes</b>
PP		637
PU		194
PE		97
ABS		54
Other		97
<b>Sub total ELV</b>		<b>1,079</b>
<b>TOTAL</b>	<b>LOWER ESTIMATE</b>	<b>49,887</b>
	<b>UPPER ESTIMATE</b>	<b>89,581</b>

Figure B46: Glasgow City Council – Estimated Plastic Arisings



SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	27,848	970	3.5%
C&I (LOWER)	8,639	3,888	45.0%
C&I (UPPER)	48,333	21,750	45.0%
C&D	8,322	1,498	18.0%
Agriculture	0	0	0.0%
WEEE	3,998	1,239	31.0%
ELV	1,079	216	20.0%
<b>Total (LOWER)</b>	<b>49,887</b>	<b>7,811</b>	<b>15.7%</b>
<b>Total (UPPER)</b>	<b>89,581</b>	<b>25,673</b>	<b>28.7%</b>

Figure B47: Glasgow City Council – Summary of Plastic Arisings

**Local Authority Household Collection**

*(This information is based on discussions with the recycling/waste management officer in the Local Authority and 2011 Waste Data Flow returns for plastic waste)*

Glasgow City Council collects plastic bottles only through comingled waste collections from households. It also accepts plastic for recycling at CA sites (comingled) and other bring sites (comingled). The material is either separated and sorted at its own MRF and then sent to a recycler or it sent direct to one of a number of recyclers south of the border. From here it is then sold on to both the export market and UK reprocessors, whichever can offer the best price.

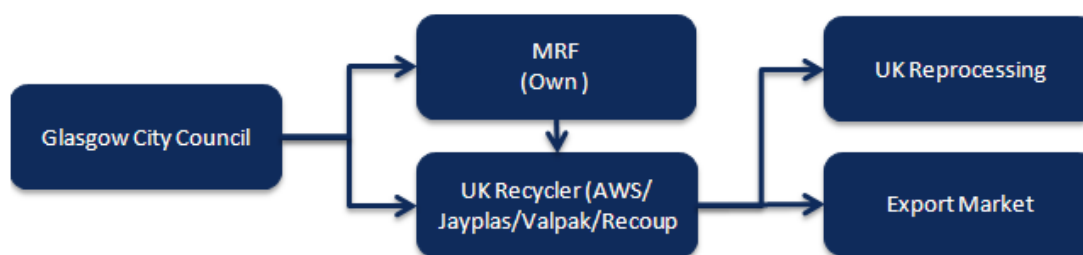


Figure B48: Glasgow City Council – Destination of Collected Plastics

Glasgow City Council offers comingled trade waste collections in the Local Authority area, accepting only plastic bottles.

**Highland Council****Summary of plastic waste arisings in Highland Council**

<b>Household</b>		<b>Tonnes</b>
Carrier bags		918
Bin bags		622
Plastic packaging film		1,356
Other plastic film		313
<b>Total plastic film</b>		<b>3,209</b>
1. PET drink bottles		1,020
1. Other PET packaging		543
2. HDPE drink bottles		581
2. Other HDPE		352
3. PVC		38
5. PP		930
6. PS		330
7. EPS		190
Other dense plastic packaging		1,399
Other dense plastic		1,894
<b>Total Dense Plastic</b>		<b>7,277</b>
<b>Sub total households</b>		<b>10,486</b>
<b>C&amp;I</b>		<b>Tonnes</b>
LOWER ESTIMATE		<b>2,229</b>
UPPER ESTIMATE		<b>12,468</b>
<i>Industrial mainly dense plastic</i>		
<i>Commercial mainly plastic film</i>		
<b>C&amp;D</b>		<b>Tonnes</b>
PVC		387
EPS/XPS/PU (Insulation)		148
HDPE/LDPE		148
Other		140
<b>Sub total C&amp;D</b>		<b>824</b>
<b>Agriculture</b>		<b>Tonnes</b>
LDPE (Film)		2,799
PP (Bale/Twine)		317
HDPE (Netwrap)		183
HDPE (Liquid containers)		44
Silage Cores (mixed)		20
Plastic oil drums		16
<b>Sub total Agriculture</b>		<b>3,379</b>
<b>WEEE</b>		<b>Tonnes</b>
Dense Plastic		1,324
<b>Sub total WEEE</b>		<b>1,324</b>
<b>ELV</b>		<b>Tonnes</b>
PP		364
PU		111
PE		56
ABS		31
Other		56
<b>Sub total ELV</b>		<b>617</b>
<b>TOTAL</b>	<b>LOWER ESTIMATE</b>	<b>18,858</b>
	<b>UPPER ESTIMATE</b>	<b>29,098</b>

Figure B49: Highland Council – Estimated Plastic Arisings

SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	10,486	407	3.9%
C&I (LOWER)	2,229	1,003	45.0%
C&I (UPPER)	12,468	5,611	45.0%
C&D	824	148	18.0%
Agriculture	3,379	676	20.0%
WEEE	1,324	410	31.0%
ELV	617	123	20.0%
<b>Total (LOWER)</b>	<b>18,858</b>	<b>2,768</b>	<b>14.7%</b>
<b>Total (UPPER)</b>	<b>29,098</b>	<b>7,375</b>	<b>25.3%</b>

Figure B50: Highland Council – Summary of Plastic Arisings

**Local Authority Household Collection**

*(This information is based on discussions with the recycling/waste management officer in the Local Authority and 2011 Waste Data Flow returns for plastic waste)*

Highland Council collects plastic bottles only through comingled waste collections from households. It also accepts plastic for recycling at CA sites (segregated). The material is either separated and sorted at a local third sector waste transfer station or it sent to a MRF. After this, the plastic will be sold on to either the export market or UK reprocessors, whichever can offer the best price.



Figure B51: Highland Council – Destination of Collected Plastics

Highland Council offers comingled trade waste collections in the Local Authority area, accepting only plastic bottles.

**Inverclyde Council****Summary of plastic waste arisings in Inverclyde Council**

<b>Household</b>		<b>Tonnes</b>
Carrier bags		271
Bin bags		201
Plastic packaging film		427
Other plastic film		90
<b>Total plastic film</b>		<b>989</b>
1. PET drink bottles		544
1. Other PET packaging		152
2. HDPE drink bottles		289
2. Other HDPE		98
3. PVC		14
5. PP		289
6. PS		106
7. EPS		63
Other dense plastic packaging		437
Other dense plastic		534
<b>Total Dense Plastic</b>		<b>2,526</b>
<i>Sub total households</i>		<b>3,515</b>
<b>C&amp;I</b>		<b>Tonnes</b>
LOWER ESTIMATE		590
UPPER ESTIMATE		3,301
<i>Industrial mainly dense plastic</i>		
<i>Commercial mainly plastic film</i>		
<b>C&amp;D</b>		<b>Tonnes</b>
PVC		4
EPS/XPS/PU (Insulation)		1
HDPE/LDPE		1
Other		1
<i>Sub total C&amp;D</i>		<b>8</b>
<b>Agriculture</b>		<b>Tonnes</b>
LDPE (Film)		98
PP (Bale/Twine)		11
HDPE (Netwrap)		6
HDPE (Liquid containers)		2
Silage Cores (mixed)		1
Plastic oil drums		1
<i>Sub total Agriculture</i>		<b>119</b>
<b>WEEE</b>		<b>Tonnes</b>
Dense Plastic		453
<i>Sub total WEEE</i>		<b>453</b>
<b>ELV</b>		<b>Tonnes</b>
PP		92
PU		28
PE		14
ABS		8
Other		14
<i>Sub total ELV</i>		<b>156</b>
<b>TOTAL</b>	<b>LOWER ESTIMATE</b>	<b>4,841</b>
	<b>UPPER ESTIMATE</b>	<b>7,552</b>

**Figure B52: Inverclyde Council – Estimated Plastic Arisings**

SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	3,515	521	14.8%
C&I (LOWER)	590	266	45.0%
C&I (UPPER)	3,301	1,486	45.0%
C&D	8	1	18.0%
Agriculture	119	24	20.0%
WEEE	453	140	31.0%
ELV	156	31	20.0%
<b>Total (LOWER)</b>	<b>4,841</b>	<b>983</b>	<b>20.3%</b>
<b>Total (UPPER)</b>	<b>7,552</b>	<b>2,203</b>	<b>29.2%</b>

Figure B53: Inverclyde Council – Summary of Plastic Arisings

**Local Authority Household Collection**

*(This information is based on discussions with the recycling/waste management officer in the Local Authority and 2011 Waste Data Flow returns for plastic waste)*

Inverclyde Council collects plastic bottles, pots, trays and tubs through comingled waste collections from households. It also accepts plastic for recycling at CA sites (segregated and comingled) and other bring sites (comingled). The material is either sent directly to a UK recycler/reprocessor or it is exported via an Environment Agency accredited exporter.



Figure B54: Inverclyde Council – Destination of Collected Plastics

Inverclyde Council does not offer trade waste collections in the Local Authority area.

**Midlothian Council****Summary of plastic waste arisings in Midlothian Council**

<b>Household</b>		<b>Tonnes</b>
Carrier bags		278
Bin bags		199
Plastic packaging film		437
Other plastic film		107
<b>Total plastic film</b>		<b>1,020</b>
1. PET drink bottles		439
1. Other PET packaging		161
2. HDPE drink bottles		277
2. Other HDPE		111
3. PVC		15
5. PP		297
6. PS		109
7. EPS		63
Other dense plastic packaging		455
Other dense plastic		718
<b>Total Dense Plastic</b>		<b>2,645</b>
<i>Sub total households</i>		<b>3,665</b>
<b>C&amp;I</b>		<b>Tonnes</b>
LOWER ESTIMATE		559
UPPER ESTIMATE		3,125
<i>Industrial mainly dense plastic</i>		
<i>Commercial mainly plastic film</i>		
<b>C&amp;D</b>		<b>Tonnes</b>
PVC		845
EPS/XPS/PU (Insulation)		323
HDPE/LDPE		323
Other		305
<i>Sub total C&amp;D</i>		<b>1,797</b>
<b>Agriculture</b>		<b>Tonnes</b>
LDPE (Film)		163
PP (Bale/Twine)		18
HDPE (Netwrap)		11
HDPE (Liquid containers)		3
Silage Cores (mixed)		1
Plastic oil drums		1
<i>Sub total Agriculture</i>		<b>196</b>
<b>WEEE</b>		<b>Tonnes</b>
Dense Plastic		431
<i>Sub total WEEE</i>		<b>431</b>
<b>ELV</b>		<b>Tonnes</b>
PP		114
PU		35
PE		17
ABS		10
Other		17
<i>Sub total ELV</i>		<b>193</b>
<b>TOTAL</b>	<b>LOWER ESTIMATE</b>	<b>6,841</b>
	<b>UPPER ESTIMATE</b>	<b>9,407</b>

Figure B55: Midlothian Council – Estimated Plastic Arisings

SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	3,665	452	12.3%
C&I (LOWER)	559	251	45.0%
C&I (UPPER)	3,125	1,406	45.0%
C&D	1,797	323	18.0%
Agriculture	196	39	20.0%
WEEE	431	133	31.0%
ELV	193	39	20.0%
<b>Total (LOWER)</b>	<b>6,841</b>	<b>1,238</b>	<b>18.1%</b>
<b>Total (UPPER)</b>	<b>9,407</b>	<b>2,393</b>	<b>25.4%</b>

Figure B56: Midlothian Council – Summary of Plastic Arisings

**Local Authority Household Collection**

*(This information is based on 2011 Waste Data Flow returns for plastic waste)*

Midlothian Council uses Viridor to sort and process its waste plastic collected for household in the local area. It is assumed that the material is then sold on for reprocessing, either within the UK or the export market, depending on the best available price.



Figure B57: Midlothian Council – Destination of Collected Plastics

Midlothian Council also offers a comingled trade waste collection service in the Local Authority area, collecting plastic bottles only.

**Moray Council**
**Summary of plastic waste arisings in Moray Council**

Household		Tonnes
Carrier bags		362
Bin bags		291
Plastic packaging film		510
Other plastic film		141
<b>Total plastic film</b>		<b>1,304</b>
1. PET drink bottles		467
1. Other PET packaging		196
2. HDPE drink bottles		195
2. Other HDPE		138
3. PVC		12
5. PP		358
6. PS		127
7. EPS		96
Other dense plastic packaging		523
Other dense plastic		975
<b>Total Dense Plastic</b>		<b>3,086</b>
<i>Sub total households</i>		<b>4,390</b>
C&I		Tonnes
LOWER ESTIMATE		<b>730</b>
UPPER ESTIMATE		<b>4,087</b>
<i>Industrial mainly dense plastic</i>		
<i>Commercial mainly plastic film</i>		
C&D		Tonnes
PVC		114
EPS/XPS/PU (Insulation)		44
HDPE/LDPE		44
Other		41
<i>Sub total C&amp;D</i>		<b>243</b>
Agriculture		Tonnes
LDPE (Film)		943
PP (Bale/Twine)		107
HDPE (Netwrap)		62
HDPE (Liquid containers)		15
Silage Cores (mixed)		7
Plastic oil drums		5
<i>Sub total Agriculture</i>		<b>1,138</b>
WEEE		Tonnes
Dense Plastic		495
<i>Sub total WEEE</i>		<b>495</b>
ELV		Tonnes
PP		142
PU		43
PE		22
ABS		12
Other		22
<i>Sub total ELV</i>		<b>241</b>
<b>TOTAL</b>	<b>LOWER ESTIMATE</b>	<b>7,238</b>
	<b>UPPER ESTIMATE</b>	<b>10,594</b>

**Figure B58: Moray Council – Estimated Plastic Arisings**



SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	4,390	89	2.0%
C&I (LOWER)	730	329	45.0%
C&I (UPPER)	4,087	1,839	45.0%
C&D	243	44	18.0%
Agriculture	1,138	228	20.0%
WEEE	495	153	31.0%
ELV	241	48	20.0%
<b>Total (LOWER)</b>	<b>7,238</b>	<b>891</b>	<b>12.3%</b>
<b>Total (UPPER)</b>	<b>10,594</b>	<b>2,401</b>	<b>22.7%</b>

Figure B59: Moray Council – Summary of Plastic Arisings

**Local Authority Household Collection**

*(This information is based on discussions with the recycling/waste management officer in the Local Authority and 2011 Waste Data Flow returns for plastic waste)*

Moray Council collects plastic bottles only through comingled waste collections from households. It also accepts plastic for recycling at CA sites (comingled) and other bring sites (comingled). The material is sent to SecureCycle (recently taken over by SIACA), based in Kirkcaldy, where it is sorted and then sold on for UK reprocessing or to the export market.



Figure B60: Moray Council – Destination of Collected Plastics

Moray Council does not offer trade waste collections in the Local Authority area.

**North Ayrshire Council****Summary of plastic waste arisings in North Ayrshire Council**

<b>Household</b>		<b>Tonnes</b>
Carrier bags		415
Bin bags		274
Plastic packaging film		639
Other plastic film		137
<b>Total plastic film</b>		<b>1,465</b>
1. PET drink bottles		568
1. Other PET packaging		248
2. HDPE drink bottles		348
2. Other HDPE		158
3. PVC		20
5. PP		433
6. PS		156
7. EPS		83
Other dense plastic packaging		660
Other dense plastic		796
<b>Total Dense Plastic</b>		<b>3,470</b>
<i>Sub total households</i>		<b>4,935</b>
<b>C&amp;I</b>		<b>Tonnes</b>
LOWER ESTIMATE		<b>831</b>
UPPER ESTIMATE		<b>4,647</b>
<i>Industrial mainly dense plastic</i>		
<i>Commercial mainly plastic film</i>		
<b>C&amp;D</b>		<b>Tonnes</b>
PVC		1,091
EPS/XPS/PU (Insulation)		418
HDPE/LDPE		418
Other		395
<i>Sub total C&amp;D</i>		<b>2,321</b>
<b>Agriculture</b>		<b>Tonnes</b>
LDPE (Film)		309
PP (Bale/Twine)		35
HDPE (Netwrap)		20
HDPE (Liquid containers)		5
Silage Cores (mixed)		2
Plastic oil drums		2
<i>Sub total Agriculture</i>		<b>373</b>
<b>WEEE</b>		<b>Tonnes</b>
Dense Plastic		744
<i>Sub total WEEE</i>		<b>744</b>
<b>ELV</b>		<b>Tonnes</b>
PP		174
PU		53
PE		27
ABS		15
Other		27
<i>Sub total ELV</i>		<b>295</b>
<b>TOTAL</b>	<b>LOWER ESTIMATE</b>	<b>9,499</b>
	<b>UPPER ESTIMATE</b>	<b>13,316</b>

Figure B61: North Ayrshire Council – Estimated Plastic Arisings

SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	4,935	453	9.2%
C&I (LOWER)	831	374	45.0%
C&I (UPPER)	4,647	2,091	45.0%
C&D	2,321	418	18.0%
Agriculture	373	75	20.0%
WEEE	744	231	31.0%
ELV	295	59	20.0%
<b>Total (LOWER)</b>	<b>9,499</b>	<b>1,609</b>	<b>16.9%</b>
<b>Total (UPPER)</b>	<b>13,316</b>	<b>3,326</b>	<b>25.0%</b>

Figure B62: North Ayrshire Council – Summary of Plastic Arisings

**Local Authority Household Collection**

*(This information is based on discussions with the recycling/waste management officer in the Local Authority and 2011 Waste Data Flow returns for plastic waste)*

North Ayrshire Council collects plastic bottles only through comingled waste collections from households. It also accepts plastic for recycling at CA sites (comingled). The waste plastic is sent to Lowmac Alloys and from there it is sold on to either the export market or to UK reprocessors, depending on the best available market price.

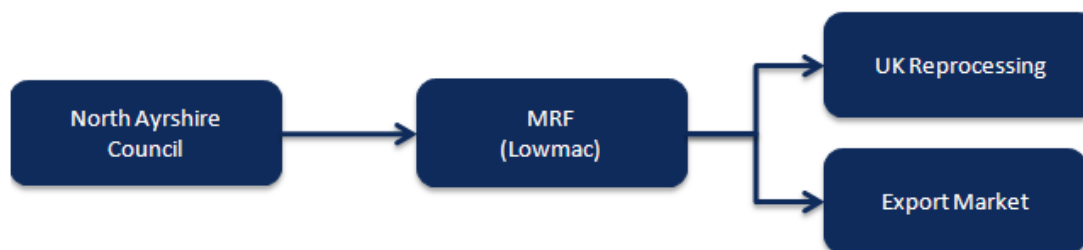


Figure B63: North Ayrshire Council – Destination of Collected Plastics

North Ayrshire Council offers comingled trade waste collections in the Local Authority area, accepting only plastic bottles.

**North Lanarkshire Council****Summary of plastic waste arisings in North Lanarkshire Council**

<b>Household</b>		<b>Tonnes</b>
	Carrier bags	1,090
	Bin bags	758
	Plastic packaging film	1,839
	Other plastic film	393
	<b>Total plastic film</b>	<b>4,080</b>
	1. PET drink bottles	2,304
	1. Other PET packaging	640
	2. HDPE drink bottles	1,503
	2. Other HDPE	426
	3. PVC	71
	5. PP	1,226
	6. PS	461
	7. EPS	236
	Other dense plastic packaging	1,912
	Other dense plastic	2,511
	<b>Total Dense Plastic</b>	<b>11,288</b>
	<i>Sub total households</i>	<b>15,368</b>
<b>C&amp;I</b>		<b>Tonnes</b>
	LOWER ESTIMATE	<b>2,632</b>
	UPPER ESTIMATE	<b>14,728</b>
	<i>Industrial mainly dense plastic</i>	
	<i>Commercial mainly plastic film</i>	
<b>C&amp;D</b>		<b>Tonnes</b>
	PVC	1,722
	EPS/XPS/PU (Insulation)	659
	HDPE/LDPE	659
	Other	623
	<i>Sub total C&amp;D</i>	<b>3,663</b>
<b>Agriculture</b>		<b>Tonnes</b>
	LDPE (Film)	91
	PP (Bale/Twine)	10
	HDPE (Netwrap)	6
	HDPE (Liquid containers)	1
	Silage Cores (mixed)	1
	Plastic oil drums	1
	<i>Sub total Agriculture</i>	<b>110</b>
<b>WEEE</b>		<b>Tonnes</b>
	Dense Plastic	1,820
	<i>Sub total WEEE</i>	<b>1,820</b>
<b>ELV</b>		<b>Tonnes</b>
	PP	401
	PU	122
	PE	61
	ABS	34
	Other	61
	<i>Sub total ELV</i>	<b>680</b>
<b>TOTAL</b>	<b>LOWER ESTIMATE</b>	<b>24,274</b>
	<b>UPPER ESTIMATE</b>	<b>36,369</b>

Figure B64: North Lanarkshire Council – Estimated Plastic Arisings

SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	15,368	3103	20.2%
C&I (LOWER)	2,632	1,185	45.0%
C&I (UPPER)	14,728	6,627	45.0%
C&D	3,663	659	18.0%
Agriculture	110	22	20.0%
WEEE	1,820	564	31.0%
ELV	680	136	20.0%
<b>Total (LOWER)</b>	<b>24,274</b>	<b>5,669</b>	<b>23.4%</b>
<b>Total (UPPER)</b>	<b>36,369</b>	<b>11,112</b>	<b>30.6%</b>

Figure B65: North Lanarkshire Council – Summary of Plastic Arisings

**Local Authority Household Collection**

*(This information is based on discussions with the recycling/waste management officer in the Local Authority and 2011 Waste Data Flow returns for plastic waste)*

North Lanarkshire Council collects plastic bottles, pots, trays and tubs through comingled waste collections from households. It also accepts plastic for recycling at CA sites (segregated). The waste plastic is sent to a local MRF for sorting and from there it is sold on to either the export market or to UK reprocessors, depending on the best available market price.



Figure B66: North Lanarkshire Council – Destination of Collected Plastics

North Lanarkshire Council does not offer trade waste collections in the Local Authority area.

**Orkney Islands Council****Summary of plastic waste arisings in Orkney Islands Council**

<b>Household</b>		<b>Tonnes</b>
Carrier bags		58
Bin bags		50
Plastic packaging film		82
Other plastic film		31
<b>Total plastic film</b>		<b>221</b>
1. PET drink bottles		54
1. Other PET packaging		31
2. HDPE drink bottles		31
2. Other HDPE		26
3. PVC		2
5. PP		59
6. PS		21
7. EPS		18
Other dense plastic packaging		86
Other dense plastic		255
<b>Total Dense Plastic</b>		<b>583</b>
<b>Sub total households</b>		<b>805</b>
<b>C&amp;I</b>		<b>Tonnes</b>
LOWER ESTIMATE		169
UPPER ESTIMATE		946
<i>Industrial mainly dense plastic</i>		
<i>Commercial mainly plastic film</i>		
<b>C&amp;D</b>		<b>Tonnes</b>
PVC		0
EPS/XPS/PU (Insulation)		0
HDPE/LDPE		0
Other		0
<b>Sub total C&amp;D</b>		<b>0</b>
<b>Agriculture</b>		<b>Tonnes</b>
LDPE (Film)		562
PP (Bale/Twine)		64
HDPE (Netwrap)		37
HDPE (Liquid containers)		9
Silage Cores (mixed)		4
Plastic oil drums		3
<b>Sub total Agriculture</b>		<b>679</b>
<b>WEEE</b>		<b>Tonnes</b>
Dense Plastic		117
<b>Sub total WEEE</b>		<b>117</b>
<b>ELV</b>		<b>Tonnes</b>
PP		41
PU		12
PE		6
ABS		3
Other		6
<b>Sub total ELV</b>		<b>69</b>
<b>TOTAL</b>	<b>LOWER ESTIMATE</b>	<b>1,837</b>
	<b>UPPER ESTIMATE</b>	<b>2,614</b>

Figure B67: Orkney Islands Council – Estimated Plastic Arisings

SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	805	10	1.2%
C&I (LOWER)	169	76	45.0%
C&I (UPPER)	946	425	45.0%
C&D	0	0	0.0%
Agriculture	679	136	20.0%
WEEE	117	36	31.0%
ELV	69	14	20.0%
<b>Total (LOWER)</b>	<b>1,837</b>	<b>272</b>	<b>14.8%</b>
<b>Total (UPPER)</b>	<b>2,614</b>	<b>621</b>	<b>23.8%</b>

Figure B68: Orkney Islands Council – Summary of Plastic Arisings

**Local Authority Household Collection**

*(This information is based on discussions with the recycling/waste management officer in the Local Authority and 2011 Waste Data Flow returns for plastic waste)*

Orkney Islands Council collects plastic bottles, and other dense plastics, such as shampoo bottles, through comingled (with kerbside sort) waste collections from households. It also accepts plastic for recycling at CA sites (segregated and comingled). The waste plastic is sent to a facility in Kirkcaldy for sorting and from there it is assumed to be sold on to either the export market or to UK reprocessors, depending on the best available market price.



Figure B69: North Lanarkshire Council – Destination of Collected Plastics

Orkney Islands Council offers comingled trade waste collections in the Local Authority area, accepting plastic bottles and other dense plastics, such as shampoo bottles.

**Perth & Kinross Council****Summary of plastic waste arisings in Perth & Kinross Council**

<b>Household</b>		<b>Tonnes</b>
Carrier bags		591
Bin bags		434
Plastic packaging film		897
Other plastic film		190
<b>Total plastic film</b>		<b>2,113</b>
1. PET drink bottles		1,033
1. Other PET packaging		332
2. HDPE drink bottles		512
2. Other HDPE		210
3. PVC		27
5. PP		612
6. PS		221
7. EPS		136
Other dense plastic packaging		916
Other dense plastic		1,095
<b>Total Dense Plastic</b>		<b>5,093</b>
<i>Sub total households</i>		<b>7,206</b>
<b>C&amp;I</b>		<b>Tonnes</b>
LOWER ESTIMATE		<b>1,392</b>
UPPER ESTIMATE		<b>7,788</b>
<i>Industrial mainly dense plastic</i>		
<i>Commercial mainly plastic film</i>		
<b>C&amp;D</b>		<b>Tonnes</b>
PVC		511
EPS/XPS/PU (Insulation)		196
HDPE/LDPE		196
Other		185
<i>Sub total C&amp;D</i>		<b>1,087</b>
<b>Agriculture</b>		<b>Tonnes</b>
LDPE (Film)		2,091
PP (Bale/Twine)		237
HDPE (Netwrap)		137
HDPE (Liquid containers)		33
Silage Cores (mixed)		15
Plastic oil drums		12
<i>Sub total Agriculture</i>		<b>2,524</b>
<b>WEEE</b>		<b>Tonnes</b>
Dense Plastic		844
<i>Sub total WEEE</i>		<b>844</b>
<b>ELV</b>		<b>Tonnes</b>
PP		231
PU		70
PE		35
ABS		20
Other		35
<i>Sub total ELV</i>		<b>392</b>
<b>TOTAL</b>	<b>LOWER ESTIMATE</b>	<b>13,444</b>
	<b>UPPER ESTIMATE</b>	<b>19,841</b>

**Figure B70: Perth & Kinross Council – Estimated Plastic Arisings**



SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	7,206	755	10.5%
C&I (LOWER)	1,392	626	45.0%
C&I (UPPER)	7,788	3,505	45.0%
C&D	1,087	196	18.0%
Agriculture	2,524	505	20.0%
WEEE	844	262	31.0%
ELV	392	78	20.0%
<b>Total (LOWER)</b>	<b>13,444</b>	<b>2,422</b>	<b>18.0%</b>
<b>Total (UPPER)</b>	<b>19,841</b>	<b>5,300</b>	<b>26.7%</b>

Figure B71: Perth & Kinross Council – Summary of Plastic Arisings

**Local Authority Household Collection**

*(This information is based on discussions with the recycling/waste management officer in the Local Authority and 2011 Waste Data Flow returns for plastic waste)*

Perth and Kinross Council collects plastic bottles, trays and tubs through comingled waste collections from households. It also accepts plastic for recycling at CA sites (comingled) and other bring sites (comingled). The waste plastic is either sent direct to a plastics recycler or to a MRF for sorting and onward sale to either the export market or to UK reprocessors, depending on the best available market price.

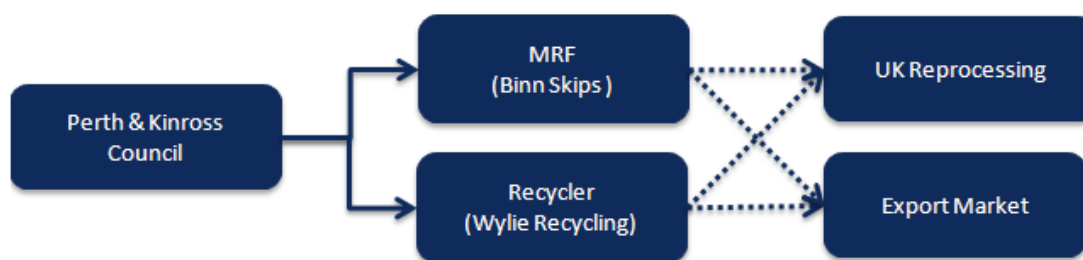


Figure B72: Perth & Kinross Council – Destination of Collected Plastics

Perth and Kinross Council does not offer trade waste collections in the Local Authority area.

**Renfrewshire Council****Summary of plastic waste arisings in Renfrewshire Council**

<b>Household</b>		<b>Tonnes</b>
	Carrier bags	675
	Bin bags	479
	Plastic packaging film	1,076
	Other plastic film	254
	<b>Total plastic film</b>	<b>2,484</b>
	1. PET drink bottles	1,123
	1. Other PET packaging	394
	2. HDPE drink bottles	714
	2. Other HDPE	268
	3. PVC	37
	5. PP	728
	6. PS	268
	7. EPS	151
	Other dense plastic packaging	1,118
	Other dense plastic	1,690
	<b>Total Dense Plastic</b>	<b>6,490</b>
	<i>Sub total households</i>	<i>8,974</i>
<b>C&amp;I</b>		<b>Tonnes</b>
	LOWER ESTIMATE	1,896
	UPPER ESTIMATE	10,609
	<i>Industrial mainly dense plastic</i>	
	<i>Commercial mainly plastic film</i>	
<b>C&amp;D</b>		<b>Tonnes</b>
	PVC	926
	EPS/XPS/PU (Insulation)	355
	HDPE/LDPE	355
	Other	335
	<i>Sub total C&amp;D</i>	<i>1,971</i>
<b>Agriculture</b>		<b>Tonnes</b>
	LDPE (Film)	41
	PP (Bale/Twine)	5
	HDPE (Netwrap)	3
	HDPE (Liquid containers)	1
	Silage Cores (mixed)	0
	Plastic oil drums	0
	<i>Sub total Agriculture</i>	<i>50</i>
<b>WEEE</b>		<b>Tonnes</b>
	Dense Plastic	1,056
	<i>Sub total WEEE</i>	<i>1,056</i>
<b>ELV</b>		<b>Tonnes</b>
	PP	216
	PU	66
	PE	33
	ABS	18
	Other	33
	<i>Sub total ELV</i>	<i>367</i>
<b>TOTAL</b>	<b>LOWER ESTIMATE</b>	<b>14,313</b>
	<b>UPPER ESTIMATE</b>	<b>23,026</b>

**Figure B73: Renfrewshire Council – Estimated Plastic Arisings**

SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	8,974	1227	13.7%
C&I (LOWER)	1,896	853	45.0%
C&I (UPPER)	10,609	4,774	45.0%
C&D	1,971	355	18.0%
Agriculture	50	10	20.0%
WEEE	1,056	327	31.0%
ELV	367	73	20.0%
<b>Total (LOWER)</b>	<b>14,313</b>	<b>2,846</b>	<b>19.9%</b>
<b>Total (UPPER)</b>	<b>23,026</b>	<b>6,766</b>	<b>29.4%</b>

Figure B74: Renfrewshire Council – Summary of Plastic Arisings

**Local Authority Household Collection**

*(This information is based on discussions with the recycling/waste management officer in the Local Authority and 2011 Waste Data Flow returns for plastic waste)*

Renfrewshire Council collects plastic bottles, trays, tubs and cartons through comingled waste collections from households. It also accepts plastic for recycling at CA sites (comingled) and other bring sites (comingled). The waste plastic is sent to a MRF for sorting. It is assumed that it then goes for onward sale to either the export market or to UK reprocessors, depending on the best available market price.



Figure B75: Renfrewshire Council – Destination of Collected Plastics

Renfrewshire Council also offers comingled trade waste collections in the Local Authority area, accepting plastic bottles, pots, trays and tubs.

**Scottish Borders Council****Summary of plastic waste arisings in Scottish Borders Council**

<b>Household</b>		<b>Tonnes</b>
Carrier bags		362
Bin bags		280
Plastic packaging film		599
Other plastic film		126
<b>Total plastic film</b>		<b>1,367</b>
1. PET drink bottles		901
1. Other PET packaging		198
2. HDPE drink bottles		500
2. Other HDPE		131
3. PVC		22
5. PP		402
6. PS		151
7. EPS		90
Other dense plastic packaging		616
Other dense plastic		788
<b>Total Dense Plastic</b>		<b>3,799</b>
<i>Sub total households</i>		<b>5,167</b>
<b>C&amp;I</b>		<b>Tonnes</b>
LOWER ESTIMATE		<b>871</b>
UPPER ESTIMATE		<b>4,872</b>
<i>Industrial mainly dense plastic</i>		
<i>Commercial mainly plastic film</i>		
<b>C&amp;D</b>		<b>Tonnes</b>
PVC		187
EPS/XPS/PU (Insulation)		72
HDPE/LDPE		72
Other		68
<i>Sub total C&amp;D</i>		<b>399</b>
<b>Agriculture</b>		<b>Tonnes</b>
LDPE (Film)		1,129
PP (Bale/Twine)		128
HDPE (Netwrap)		74
HDPE (Liquid containers)		18
Silage Cores (mixed)		8
Plastic oil drums		6
<i>Sub total Agriculture</i>		<b>1,363</b>
<b>WEEE</b>		<b>Tonnes</b>
Dense Plastic		644
<i>Sub total WEEE</i>		<b>644</b>
<b>ELV</b>		<b>Tonnes</b>
PP		191
PU		58
PE		29
ABS		16
Other		29
<i>Sub total ELV</i>		<b>324</b>
<b>TOTAL</b>	<b>LOWER ESTIMATE</b>	<b>8,767</b>
	<b>UPPER ESTIMATE</b>	<b>12,768</b>

**Figure B76: Scottish Borders Council – Estimated Plastic Arisings**

SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	5,167	1070	20.7%
C&I (LOWER)	871	392	45.0%
C&I (UPPER)	4,872	2,192	45.0%
C&D	399	72	18.0%
Agriculture	1,363	273	20.0%
WEEE	644	200	31.0%
ELV	324	65	20.0%
<b>Total (LOWER)</b>	<b>8,767</b>	<b>2,071</b>	<b>23.6%</b>
<b>Total (UPPER)</b>	<b>12,768</b>	<b>3,871</b>	<b>30.3%</b>

**Figure B77: Scottish Borders Council – Summary of Plastic Arisings**

### Local Authority Household Collection

*(This information is based on discussions with the recycling/waste management officer in the Local Authority and 2011 Waste Data Flow returns for plastic waste)*

Scottish Borders Council collects plastic bottles, film, pots, trays and tubs through comingled waste collections from households. It also accepts plastic for recycling at CA sites (comingled). The waste plastic is then sent to a MRF for sorting before it is sold to either the export market or to UK reprocessors, depending on the best available market price.



**Figure B78: Scottish Borders Council – Destination of Collected Plastics**

Scottish Borders Council also offers comingled trade waste collections in the Local Authority area, accepting plastic bottles, film, pots, trays and tubs.

**Shetland Isles Council****Summary of plastic waste arisings in Shetland Islands Council**

<b>Household</b>		<b>Tonnes</b>
Carrier bags		146
Bin bags		91
Plastic packaging film		223
Other plastic film		43
<b>Total plastic film</b>		<b>503</b>
1. PET drink bottles		191
1. Other PET packaging		89
2. HDPE drink bottles		116
2. Other HDPE		54
3. PVC		7
5. PP		151
6. PS		54
7. EPS		26
Other dense plastic packaging		230
Other dense plastic		215
<b>Total Dense Plastic</b>		<b>1,132</b>
<i>Sub total households</i>		<b>1,634</b>
<b>C&amp;I</b>		<b>Tonnes</b>
LOWER ESTIMATE		<b>232</b>
UPPER ESTIMATE		<b>1,298</b>
<i>Industrial mainly dense plastic</i>		
<i>Commercial mainly plastic film</i>		
<b>C&amp;D</b>		<b>Tonnes</b>
PVC		9
EPS/XPS/PU (Insulation)		4
HDPE/LDPE		4
Other		3
<i>Sub total C&amp;D</i>		<b>20</b>
<b>Agriculture</b>		<b>Tonnes</b>
LDPE (Film)		608
PP (Bale/Twine)		69
HDPE (Netwrap)		40
HDPE (Liquid containers)		10
Silage Cores (mixed)		4
Plastic oil drums		3
<i>Sub total Agriculture</i>		<b>734</b>
<b>WEEE</b>		<b>Tonnes</b>
Dense Plastic		130
<i>Sub total WEEE</i>		<b>130</b>
<b>ELV</b>		<b>Tonnes</b>
PP		40
PU		12
PE		6
ABS		3
Other		6
<i>Sub total ELV</i>		<b>68</b>
<b>TOTAL</b>	<b>LOWER ESTIMATE</b>	<b>2,818</b>
	<b>UPPER ESTIMATE</b>	<b>3,884</b>

Figure B79: Shetland Isles Council – Estimated Plastic Arisings

SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	1,634	137	8.4%
C&I (LOWER)	232	104	45.0%
C&I (UPPER)	1,298	584	45.0%
C&D	20	4	18.0%
Agriculture	734	147	20.0%
WEEE	130	40	31.0%
ELV	68	14	20.0%
<b>Total (LOWER)</b>	<b>2,818</b>	<b>446</b>	<b>15.8%</b>
<b>Total (UPPER)</b>	<b>3,884</b>	<b>925</b>	<b>23.8%</b>

Figure B80: Shetland Isles Council – Summary of Plastic Arisings

#### Local Authority Household Collection

*(This information is based on 2011 Waste Data Flow returns for plastic waste)*

Waste Data Flow returns suggest that Shetland Isles Council collects some waste plastic from households and sent to more than one type of recycler/handler. Plastic bottles and other unspecified types of plastics are sent to UK reprocessor, AWS Eco Plastics.



Figure B81: Shetland Isles Council – Destination of Collected Plastics

**South Ayrshire Council****Summary of plastic waste arisings in South Ayrshire Council**

<b>Household</b>		<b>Tonnes</b>
	Carrier bags	398
	Bin bags	317
	Plastic packaging film	589
	Other plastic film	184
	<b>Total plastic film</b>	<b>1,487</b>
	1. PET drink bottles	473
	1. Other PET packaging	222
	2. HDPE drink bottles	283
	2. Other HDPE	170
	3. PVC	17
	5. PP	411
	6. PS	149
	7. EPS	106
	Other dense plastic packaging	616
	Other dense plastic	1,409
	<b>Total Dense Plastic</b>	<b>3,856</b>
	<i>Sub total households</i>	<b>5,344</b>
<b>C&amp;I</b>		<b>Tonnes</b>
	LOWER ESTIMATE	<b>1,014</b>
	UPPER ESTIMATE	<b>5,673</b>
	<i>Industrial mainly dense plastic</i>	
	<i>Commercial mainly plastic film</i>	
<b>C&amp;D</b>		<b>Tonnes</b>
	PVC	163
	EPS/XPS/PU (Insulation)	62
	HDPE/LDPE	62
	Other	59
	<i>Sub total C&amp;D</i>	<b>346</b>
<b>Agriculture</b>		<b>Tonnes</b>
	LDPE (Film)	328
	PP (Bale/Twine)	37
	HDPE (Netwrap)	21
	HDPE (Liquid containers)	5
	Silage Cores (mixed)	2
	Plastic oil drums	2
	<i>Sub total Agriculture</i>	<b>396</b>
<b>WEEE</b>		<b>Tonnes</b>
	Dense Plastic	658
	<i>Sub total WEEE</i>	<b>658</b>
<b>ELV</b>		<b>Tonnes</b>
	PP	160
	PU	49
	PE	24
	ABS	14
	Other	24
	<i>Sub total ELV</i>	<b>271</b>
<b>TOTAL</b>	<b>LOWER ESTIMATE</b>	<b>8,029</b>
	<b>UPPER ESTIMATE</b>	<b>12,688</b>

Figure B82: South Ayrshire Council – Estimated Plastic Arisings



SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	5,344	295	5.5%
C&I (LOWER)	1,014	456	45.0%
C&I (UPPER)	5,673	2,553	45.0%
C&D	346	62	18.0%
Agriculture	396	79	20.0%
WEEE	658	204	31.0%
ELV	271	54	20.0%
<b>Total (LOWER)</b>	<b>8,029</b>	<b>1,151</b>	<b>14.3%</b>
<b>Total (UPPER)</b>	<b>12,688</b>	<b>3,248</b>	<b>25.6%</b>

Figure B83: South Ayrshire Council – Summary of Plastic Arisings

**Local Authority Household Collection**

*(This information is based on discussions with the recycling/waste management officer in the Local Authority and 2011 Waste Data Flow returns for plastic waste)*

South Ayrshire Council collects plastic bottles only through comingled waste collections from households. It also accepts plastic for recycling at CA sites (comingled and segregated) and other bring sites (comingled). The waste plastic is then sent to a MRF for sorting before it is sold to either the export market or to UK reprocessors, depending on the best available market price.

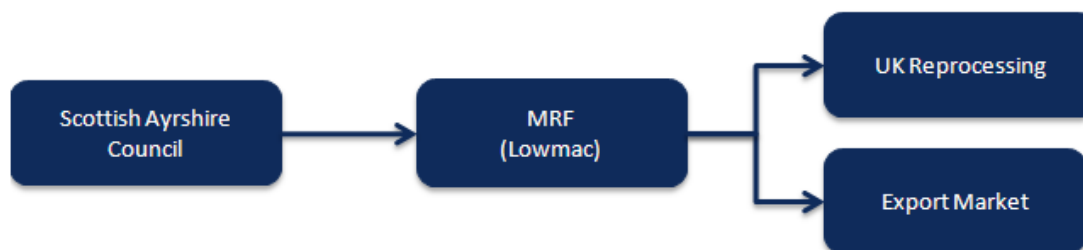


Figure B84: South Ayrshire Council – Destination of Collected Plastics

South Ayrshire Council also offers comingled trade waste collections in the Local Authority area, accepting plastic bottles only.

**South Lanarkshire Council****Summary of plastic waste arisings in South Lanarkshire Council**

<b>Household</b>		<b>Tonnes</b>
	Carrier bags	1,354
	Bin bags	885
	Plastic packaging film	2,204
	Other plastic film	437
	<b>Total plastic film</b>	<b>4,880</b>
	1. PET drink bottles	2,405
	1. Other PET packaging	813
	2. HDPE drink bottles	1,541
	2. Other HDPE	513
	3. PVC	78
	5. PP	1,473
	6. PS	543
	7. EPS	265
	Other dense plastic packaging	2,280
	Other dense plastic	2,479
	<b>Total Dense Plastic</b>	<b>12,389</b>
	<i>Sub total households</i>	<i>17,269</i>
<b>C&amp;I</b>		<b>Tonnes</b>
	LOWER ESTIMATE	2,529
	UPPER ESTIMATE	14,151
	<i>Industrial mainly dense plastic</i>	
	<i>Commercial mainly plastic film</i>	
<b>C&amp;D</b>		<b>Tonnes</b>
	PVC	71
	EPS/XPS/PU (Insulation)	27
	HDPE/LDPE	27
	Other	26
	<i>Sub total C&amp;D</i>	<i>150</i>
<b>Agriculture</b>		<b>Tonnes</b>
	LDPE (Film)	793
	PP (Bale/Twine)	90
	HDPE (Netwrap)	52
	HDPE (Liquid containers)	13
	Silage Cores (mixed)	6
	Plastic oil drums	5
	<i>Sub total Agriculture</i>	<i>958</i>
<b>WEEE</b>		<b>Tonnes</b>
	Dense Plastic	1,729
	<i>Sub total WEEE</i>	<i>1,729</i>
<b>ELV</b>		<b>Tonnes</b>
	PP	413
	PU	126
	PE	63
	ABS	35
	Other	63
	<i>Sub total ELV</i>	<i>700</i>
<b>TOTAL</b>	<b>LOWER ESTIMATE</b>	<b>23,335</b>
	<b>UPPER ESTIMATE</b>	<b>34,957</b>

Figure B85: South Lanarkshire Council – Estimated Plastic Arisings

SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	17,269	2777	16.1%
C&I (LOWER)	2,529	1,138	45.0%
C&I (UPPER)	14,151	6,368	45.0%
C&D	150	27	18.0%
Agriculture	958	192	20.0%
WEEE	1,729	536	31.0%
ELV	700	140	20.0%
<b>Total (LOWER)</b>	<b>23,335</b>	<b>4,810</b>	<b>20.6%</b>
<b>Total (UPPER)</b>	<b>34,957</b>	<b>10,039</b>	<b>28.7%</b>

Figure B86: South Lanarkshire Council – Summary of Plastic Arisings

### Local Authority Household Collection

*(This information is based on discussions with the recycling/waste management officer in the Local Authority and 2011 Waste Data Flow returns for plastic waste)*

South Lanarkshire Council collects plastic bottles, pots, trays, tubs and other dense plastics, such as shampoo bottles, through comingled waste collections from households. It also accepts plastic for recycling at CA sites (comingled). The waste plastic is then sent to a MRF for sorting before it is assumed to be sold to either the export market or to UK reprocessors, depending on the best available market price.



Figure B87: South Lanarkshire Council – Destination of Collected Plastics

South Lanarkshire Council also offers comingled trade waste collections in the Local Authority area, accepting plastic bottles, pots, trays, tubs and other dense plastics, such as shampoo bottles.

**Stirling Council****Summary of plastic waste arisings in Stirling Council**

<b>Household</b>		<b>Tonnes</b>
Carrier bags		251
Bin bags		176
Plastic packaging film		396
Other plastic film		93
<b>Total plastic film</b>		<b>916</b>
1. PET drink bottles		396
1. Other PET packaging		147
2. HDPE drink bottles		249
2. Other HDPE		99
3. PVC		13
5. PP		268
6. PS		98
7. EPS		55
Other dense plastic packaging		411
Other dense plastic		602
<b>Total Dense Plastic</b>		<b>2,339</b>
<i>Sub total households</i>		<b>3,255</b>
<b>C&amp;I</b>		<b>Tonnes</b>
LOWER ESTIMATE		<b>968</b>
UPPER ESTIMATE		<b>5,417</b>
<i>Industrial mainly dense plastic</i>		
<i>Commercial mainly plastic film</i>		
<b>C&amp;D</b>		<b>Tonnes</b>
PVC		27
EPS/XPS/PU (Insulation)		10
HDPE/LDPE		10
Other		10
<i>Sub total C&amp;D</i>		<b>58</b>
<b>Agriculture</b>		<b>Tonnes</b>
LDPE (Film)		472
PP (Bale/Twine)		53
HDPE (Netwrap)		31
HDPE (Liquid containers)		7
Silage Cores (mixed)		3
Plastic oil drums		3
<i>Sub total Agriculture</i>		<b>570</b>
<b>WEEE</b>		<b>Tonnes</b>
Dense Plastic		512
<i>Sub total WEEE</i>		<b>512</b>
<b>ELV</b>		<b>Tonnes</b>
PP		154
PU		47
PE		23
ABS		13
Other		23
<i>Sub total ELV</i>		<b>261</b>
<b>TOTAL</b>	<b>LOWER ESTIMATE</b>	<b>5,625</b>
	<b>UPPER ESTIMATE</b>	<b>10,073</b>

**Figure B88: Stirling Council – Estimated Plastic Arisings**

SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	3,255	402	12.3%
C&I (LOWER)	968	436	45.0%
C&I (UPPER)	5,417	2,437	45.0%
C&D	58	10	18.0%
Agriculture	570	114	20.0%
WEEE	512	159	31.0%
ELV	261	52	20.0%
<b>Total (LOWER)</b>	<b>5,625</b>	<b>1,173</b>	<b>20.9%</b>
<b>Total (UPPER)</b>	<b>10,073</b>	<b>3,175</b>	<b>31.5%</b>

**Figure B89: Stirling Council – Summary of Plastic Arisings**

#### Local Authority Household Collection

*(This information is based on discussions with the recycling/waste management officer in the Local Authority and 2011 Waste Data Flow returns for plastic waste)*

Stirling Council collects plastic bottles only through comingled waste collections from households. It also accepts plastic for recycling at CA sites (segregated). The waste plastic is then sent direct to a UK plastics reprocessor where it is washed and extruded into food grade rPET.



**Figure B90: Stirling Council – Destination of Collected Plastics**

Stirling Council also offers segregated trade waste collections in the Local Authority area, accepting plastic bottles only.

**West Dunbartonshire Council****Summary of plastic waste arisings in West Dunbartonshire Council**

<b>Household</b>		<b>Tonnes</b>
	Carrier bags	342
	Bin bags	233
	Plastic packaging film	532
	Other plastic film	119
	<b>Total plastic film</b>	<b>1,226</b>
	1. PET drink bottles	497
	1. Other PET packaging	202
	2. HDPE drink bottles	308
	2. Other HDPE	133
	3. PVC	17
	5. PP	361
	6. PS	131
	7. EPS	72
	Other dense plastic packaging	551
	Other dense plastic	739
	<b>Total Dense Plastic</b>	<b>3,010</b>
	<i>Sub total households</i>	<b>4,236</b>
<b>C&amp;I</b>		<b>Tonnes</b>
	LOWER ESTIMATE	559
	UPPER ESTIMATE	3,125
	<i>Industrial mainly dense plastic</i>	
	<i>Commercial mainly plastic film</i>	
<b>C&amp;D</b>		<b>Tonnes</b>
	PVC	49
	EPS/XPS/PU (Insulation)	19
	HDPE/LDPE	19
	Other	18
	<i>Sub total C&amp;D</i>	<b>104</b>
<b>Agriculture</b>		<b>Tonnes</b>
	LDPE (Film)	48
	PP (Bale/Twine)	5
	HDPE (Netwrap)	3
	HDPE (Liquid containers)	1
	Silage Cores (mixed)	0
	Plastic oil drums	0
	<i>Sub total Agriculture</i>	<b>58</b>
<b>WEEE</b>		<b>Tonnes</b>
	Dense Plastic	500
	<i>Sub total WEEE</i>	<b>500</b>
<b>ELV</b>		<b>Tonnes</b>
	PP	132
	PU	40
	PE	20
	ABS	11
	Other	20
	<i>Sub total ELV</i>	<b>225</b>
<b>TOTAL</b>	LOWER ESTIMATE	<b>5,682</b>
	UPPER ESTIMATE	<b>8,248</b>

Figure B91: West Dunbartonshire – Estimated Plastic Arisings

SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	4,236	445	10.5%
C&I (LOWER)	559	251	45.0%
C&I (UPPER)	3,125	1,406	45.0%
C&D	104	19	18.0%
Agriculture	58	12	20.0%
WEEE	500	155	31.0%
ELV	225	45	20.0%
<b>Total (LOWER)</b>	<b>5,682</b>	<b>927</b>	<b>16.3%</b>
<b>Total (UPPER)</b>	<b>8,248</b>	<b>2,081</b>	<b>25.2%</b>

Figure B92: West Dunbartonshire Council – Summary of Plastic Arisings

**Local Authority Household Collection**

*(This information is based on discussions with the recycling/waste management officer in the Local Authority and 2011 Waste Data Flow returns for plastic waste)*

West Dunbartonshire Council collects plastic bottles only through comingled waste collections from households. It also accepts plastic for recycling at CA sites (comingled) and other bring sites (comingled). The waste plastic is first sent to a MRF and then sold for further processing either in the UK or export markets.



Figure B93: West Dunbartonshire Council – Destination of Collected Plastics

West Dunbartonshire Council also offers comingled trade waste collections in the Local Authority area, accepting plastic bottles only.

## West Lothian

## Summary of plastic waste arisings in West Lothian Council

Household		Tonnes
	Carrier bags	518
	Bin bags	346
	Plastic packaging film	851
	Other plastic film	174
	<b>Total plastic film</b>	<b>1,888</b>
	1. PET drink bottles	965
	1. Other PET packaging	308
	2. HDPE drink bottles	623
	2. Other HDPE	199
	3. PVC	31
	5. PP	568
	6. PS	211
	7. EPS	105
	Other dense plastic packaging	882
	Other dense plastic	1,037
	<b>Total Dense Plastic</b>	<b>4,929</b>
	<i>Sub total households</i>	<b>6,818</b>
C&I		Tonnes
	LOWER ESTIMATE	1,759
	UPPER ESTIMATE	9,840
	<i>Industrial mainly dense plastic</i>	
	<i>Commercial mainly plastic film</i>	
C&D		Tonnes
	PVC	244
	EPS/XPS/PU (Insulation)	93
	HDPE/LDPE	93
	Other	88
	<i>Sub total C&amp;D</i>	<b>519</b>
Agriculture		Tonnes
	LDPE (Film)	219
	PP (Bale/Twine)	25
	HDPE (Netwrap)	14
	HDPE (Liquid containers)	3
	Silage Cores (mixed)	2
	Plastic oil drums	1
	<i>Sub total Agriculture</i>	<b>265</b>
WEEE		Tonnes
	Dense Plastic	972
	<i>Sub total WEEE</i>	<b>972</b>
ELV		Tonnes
	PP	241
	PU	73
	PE	37
	ABS	20
	Other	37
	<i>Sub total ELV</i>	<b>408</b>
<b>TOTAL</b>	<b>LOWER ESTIMATE</b>	<b>10,739</b>
	<b>UPPER ESTIMATE</b>	<b>18,820</b>

Figure B94: West Lothian – Estimated Plastic Arisings



SOURCE	Tonnes		Recycling rate
	Arisings	Recycling	
Household	6,818	1175	17.2%
C&I (LOWER)	1,759	791	45.0%
C&I (UPPER)	9,840	4,428	45.0%
C&D	519	93	18.0%
Agriculture	265	53	20.0%
WEEE	972	301	31.0%
ELV	408	82	20.0%
<b>Total (LOWER)</b>	<b>10,739</b>	<b>2,496</b>	<b>23.2%</b>
<b>Total (UPPER)</b>	<b>18,820</b>	<b>6,132</b>	<b>32.6%</b>

Figure B95: West Lothian Council – Summary of Plastic Arisings

**Local Authority Household Collection**

*(This information is based on discussions with the recycling/waste management officer in the Local Authority and 2011 Waste Data Flow returns for plastic waste)*

West Lothian Council collects plastic bottles and other dense plastics bottles, such as shampoo bottles, through comingled waste collections from households. It also accepts plastic for recycling at CA sites (comingled and segregated). Some of the waste plastic is first sent to a MRF and then sold for further processing either in the UK or export markets. Some mixed plastic bottles, however, are sent direct to an accredited exporter.



Figure B96: West Lothian Council – Destination of Collected Plastics

West Lothian Council also offers both comingled and segregated trade waste collections in the Local Authority area, accepting plastic bottles only.

## Appendix C – WEEE and ELV ATFs

## WEEE ATFs

Organisation	Contact Details	
	Address	Post-Code
Balasar Trading	Unit A3, Shanks Park Industrial Estate, Shanks Way, Barrhead	G78 1SP
Burnhouse Discount Appliance Com	Unit 1, Old B.R.S Depot, Annanhill Industrial Estate, Irvine Road, Kilmarn	KA1 2RT
CCL (North) Limited	1 Dunlop Drive, Meadowhead, Irvine, Ayrshire	KA11 5AU
Christie and Son (Metal Merchants)	Lobnitz Dock, Meadowside Street, Renfrew	PA4 8SY
Computer Recycling Services Limited	Block 2, Units 3 & 4 Piper Street, Baldovie Industrial Estate, Dundee	DD4 0NT
Concorde Metal Recycling	80 Locks Street, Coatbridge	ML5 3RT
Datec Technologies Limited	1 Byrehill Place, West Byrehill Industrial Estate, Kilwinning, Ayrshire	KA13 6LD
Easdale Environmental Developmen	Unit 6a Mid Road, Blairlinn Industrial Estate, Cumbernauld, Glasgow, La	G67 2TT
Electrical Waste Recycling Group	400 Denmark Street, Glasgow	G22 6DB
European Metal Recycling	Keirklee Road, Bellshill, Lanarkshire	ML4 2QW
Glasgow Furniture Initiative	255 Blairtummock Road, Queenslie, Glasgow	G33 4ED
Grangemouth Enterprises Limited	10 Dundas Street, Grangemouth, Stirlingshire	FK3 8BX
Home Economics	Unit 12, Acorn Business Centre, Arran Road, North Muirton, Perth	PH1 3DZ
ILM (Highland)	Unit 1G, Teaninich Industrial Estate, AIness, Ross-shire	IV17 0XS
Intelligent Storage Solutions	Unit 18, Stirling Road Industrial Estate, Lverlock Road, Airdrie, North Lar	ML6 7UD
John Lawrie	Forties Road, Forties Industrial Estate, Montrose, Angus	DD10 9ET
John R Adam	King George V Dock, Renfrew Road, Glasgow	G51 4SD
Lowmac Alloys Limited	Unit 22, Oldhall West Industrial Estate, Shewalton, Irvine	KA11 5AR
MGH Scotland Limited	131 Deerdykes View, Westfield South, Cumbernauld, North Lanarkshire	G68 9HN
Moock Environmental Solutions Limi	Unit 6a Mid Road, Blairlinn Industrial Estate, Cumbernauld, Glasgow, La	G67 2TT
Re-claim WEEE Solutions Ltd	Unit 1, Camelon Street, Carntyne Industrial Estate, Glasgow	G32 6AF
Redeem Ltd	31-37 Etna Road, Middlefield Industrial Estate, Falkirk, Stirlingshire	FK2 9EG
Regeneris (Glasgow) Ltd (previous	32 Fountain Drive, Inchinnan Business Park, Renfrewshire	PA4 9RF
Restructa Limited (Arkwright Way)	15-16 Arkwright Way, North Newmoor Industrial Estate, Irvine, Ayrshire	KA11 4JU
Re-Tek (UK) Limited	2 Hurlawcrook Place, East Kilbride	G75 0AP
Robertson Metals Recycling Limited	The Bay, Inverkeithing, Fife	KY11 1HL
S3 Interactive Limited	1-2 Dunrobin Court, Clydebank Business Park, Glasgow	G81 2QP
Shore Waste & Recycling	Moorfoot House, Amisfield, Dumfries	DG1 3LP
SIMS Group UK Ltd	Irongray Business Park, Lochside Industrail Estate, Dumfries	DG2 0NR
Stewart Melrose (Bathgate) Ltd	Pond Industrial Park, Whitburn Road, Bathgate, West Lothian	EH48 2HR
Tayside Recyclers	Unit 1 & 2, South Dudhope Mill, Douglas Street, Dundee	DD1 5AN
TES-AMM (Europe) Limited	3 Drummond Crescent, Riverside Business Park, Irvine, Ayrshire	KA11 5AN
TLC Recycling Limited	Block 4, Nobel Road, West Gourdie Industrial Estate, Dundee	DD2 4TH
Viridor Enviros Scot Ltd	Friarton Bridge Park, Friarton Road, Perth	PH2 8DD
WEEE Solutions Limited	Unit 3, 69 Burnbrae Road, Linwood Industrial Estate, Linwood, Renfrew	PA3 3BD
William Tracey Ltd	Cable Road, Viewfield Industrial Estate, Glenrothes	KY6 2SY

## ELV ATFs

Organisation	Contact Details	
	Address	Post-Code
60 North Recycling Ltd.	60 North Recycling Ltd., Layfields/Rova Head, Lerwick, Shetland	ZE1 0PY
A1 Autospares	A1 Autospares, Newtonloan Toll, Gorebridge	EH23 4NB
AA Autobreakers	AA Autobreakers, Main Street, Mossend, Bellshill	ML4 1DX
Abbey Car Breakers	Abbey Car Breakers, 142 Abercorn Street, Paisley	PA3 4AL
Allparts Vehicle Dismantlers	Allparts Vehicle Dismantlers, Hillview Road, High Bonnybridge, Falkirk.	FK4 2ER
Alness Autobreakers	Alness Autobreakers, Site 22/23, Evanton Industrial Estate, Evanton.	IV16 9XJ
AMC Salvage Recovery	AMC Salvage Recovery, Unit 6, Woodhead Road, Chryston	G69 9HZ
Angus Auto Spares	Angus Auto Spares, Riverside Road, Montrose, Angus	DD10 9NJ
Auto Dismantlers (Alloa)	Auto Dismantlers (Alloa), Clackmannan Road, Alloa	FK10 4DA
Autopoint Car Breakers	Autopoint Car Breakers, Ice House Brae (North), Lauriston, Falkirk.	FK2 9NJ
Autosalvage	Autosalvage, Knowehead Quarry, Locharbriggs, Dumfries	DG1 1QX
Auto-Tec (Scotland) Ltd	Auto-Tec (Scotland) Ltd, 5 Queen Street, Port Glasgow	PA14 5EF
Ayrshire Bike Salvage	Ayrshire Bike Salvage, Common Cottage, Auchinleck, East Ayrshire.	KA18 3JN
B McKenzie	B McKenzie, 18 Forth Street Riverside, Stirling	FK8 1UE
B McKenzie	B McKenzie, 8 Broadleys Road, Stirling	FK7 7ST
Barry Devlin Services	Barry Devlin Services, Wyndford Garage, Knockentibber, Kilmarnock	KA2 0DY
Bauld Autobreakers	Bauld Autobreakers, Cartmore Industrial Estate, Lochgelly	KY5 8LL
Beith Car Breakers	Beith Car Breakers, Yards 7 & 8, Mains Road, Beith	KA15 2AP
Bellshill Autobreakers	Bellshill Autobreakers, Gate 4, Cardean Road, Mossend, Bellshill	ML4 1ED
Bernard Hunter, 600 Gilmerton Road	Bernard Hunter, 600 Gilmerton Road, Edinburgh	EH17 8RY
Birchwood,	Birchwood, Kinellar, Aberdeenshire	AB21 0SH
Birnam Motor Salvage	Birnam Motor Salvage, Blantyre Farm Road, Uddingston	G71 7RN
Bridgend Metal Recycling	Bridgend Metal Recycling, Main Street, Auchinleck	KA18 2AB
Brookfield Metal Processors (Linlithgow)	Brookfield Metal Processors (Linlithgow) Ltd., Avontoun Works, Linlithgow.	EH49 6DQ
BSM Vehicle Dismantlers	BSM Vehicle Dismantlers, Montgomery Drive, Mountfleurie, Leven. Fife	KY8 4AQ
C & C Autosalvage	C & C Autosalvage, 20 Meadow Road, Motherwell	ML1 1QB
C & R Jamieson	C & R Jamieson, 15 Forrest Street, Glasgow.	G40 2TX
Campbell Commercials	Campbell Commercials, Argyll Works, Alexandria	G83 0TJ
Campbells Auto Salvage	Campbells Auto Salvage, Colinshiel Rd, Armadale.	EH48 3QE
Carberry Metals & Car Breakers	Carberry Metals & Car Breakers, Dalreoch Yard, Dumbarton	G82 4BY
Christie & Son	Christie & Son, Lobnitz Dock, Renfrew	PA4 8SY
Clarkston Autobreakers, Cardean Road	Clarkston Autobreakers, Cardean Road, Bellshill	ML4 1EF
Clydebank Dismantlers	Clydebank Dismantlers, Halley St, New Albion Industrial Estate, Glasgow	G13 4DJ
COPART UK	COPART UK, Bellknowes Industrial Estate, Inverkeithing	KY11 1HZ
CSR Ltd	CSR Ltd, 1 Beryl Street, Baldovie Ind Est, Dundee	DD4 0HX
DA Autoparts	DA Autoparts, Unit B1 Garroch Business Park, Dumfries.	DG1 1NA
DA Autoparts Ltd	DA Autoparts Ltd, Blackparts Industrial Estate, Commerce Road, Stranraer	DG9 7DD
DA Autoparts Ltd, St Mary's Industrial Estate	DA Autoparts Ltd, St Mary's Industrial Estate, Dumfries	DG1 1NA
Dalcrue Autosalvage	Dalcrue Autosalvage, Dalcrue, by Methven, Perth	PH1 3LX
Dalkeith Demolition Ltd	Dalkeith Demolition Ltd, Unit 27, Mayfield Industrial Estate, Dalkeith, Midlothian.	EH22 4AD
Dalton Group Ltd	Dalton Group Ltd, Youngs Road, East Mains Industrial Estate, Broxburn EH52 5LY	EH52 5LY
David Morton (Larbert) Ltd	David Morton (Larbert) Ltd, Glen Works, Glen Village, Falkirk.	FK1 2BQ
David Ritchie & Sons Ltd	David Ritchie & Sons Ltd, Granish Quarry & Waste Recycling Centre, Aviemore	PH22 1QD
David W. Martin & Co. Limited	David W. Martin & Co. Limited, 1 South Camp, Chapelcross, Creca, Annan	DG7 1DS
Deans Park	Deans Park, Irongray Road, Dumfries	DG2 0HS
Dunsmore Brothers	Dunsmore Brothers, Milburn Yard, Burnhead Road, Larkhall	ML9 3AB
Eddie Dunn Autobreakers Ltd	Eddie Dunn Autobreakers Ltd, 5 Beryl Street, Baldovie Industrial Estate, Dundee	DD4 0HX
End of Life Vehicles (Scotland) Ltd	End of Life Vehicles (Scotland) Ltd, 37 Downiebrae Road, Rutherglen.	G73 1PW
Fife Motor Spares	Fife Motor Spares Station Head Road, Lochgelly	KY5 9EG
Finlayson Auto Salvage	Finlayson Auto Salvage, 107 Market Street, Musselburgh	EH21 6PZ
Finnie Skip Hire	Finnie Skip Hire, 32 Longman Drive, Inverness.	IV1 1SU
Forsyth of Denny Ltd	Forsyth of Denny Ltd, Easterton, Stirling Road, Denny.	FK6 6RF
Forsyth of Denny Ltd	Forsyth of Denny Ltd, Northfield Yard, Dunipace, Denny	FK6 6LA
Forth Valley Automotive	Forth Valley Automotive, North Main Street, Carronshore, Falkirk.	FK2 8HZ
Fraser Motor Spares	Fraser Motor Spares, Unit 22, Steven Road, Huntly	AB54 8SX
GA White Motors	GA White Motors, Charlesfield Industrial Estate, St Boswells, Melrose.	TD6 0HH
General Autos, Southbank Road, Kirkcaldy	General Autos, Southbank Road, Kirkcaldy	G66 1NH
Glasgow City Council	Glasgow City Council, Vehicle Compound, Avenue Street, Bridgton, Glasgow.	G40 3SA
Glaswegian Automobile Enterprises	Glaswegian Automobile Enterprises, 151-161 Langside Rd, Glasgow	G42 7JX
Gourock Car Breakers	Gourock Car Breakers, 3 Cardwell Road, Gourock	PA19 1UB
Govan Motors (T/A Japs Autoparts)	Govan Motors (T/A Japs Autoparts), 161 Helen Street, Govan, Glasgow.	G51 3HD
Gray's Metals Limited	Gray's Metals Limited, Unit 4, Randolph Industrial Estate, Kirkcaldy	KY1 2YX
GRC Recycling Ltd	GRC Recycling Ltd, East Camperdown Street, Dundee Docks, Dundee.	DD1 3LG

Organisation	Contact Details	
	Address	Post-Code
Hamilton Waste & Recycling Ltd.	Hamilton Waste & Recycling Ltd. Westfortune Farm, Drem, North Berwick	EH39 5LL
Headswood Garage	Headswood Garage, Whitehill Farm, Myohtill Road, Denny.	FK6 5NH
Henderson Kerr Limited	Henderson Kerr Limited, 11 Paterson Street, Dundee	DD3 6OR
Henderson Kerr Ltd	Henderson Kerr Ltd, Kirklee Road, Bellshill	ML4 2QW
Henderson Kerr Ltd	Henderson Kerr Ltd, Kirklee Road, Mossend, Bellshill	ML4 2QW
Henderson Motors	Henderson Motors, Inveraldie Farm, Inveraldie, by Dundee.	DD4 0QL
Henry Gray & Sons, Randolph Industrial Estate, Kirkcaldy	Henry Gray & Sons, Randolph Industrial Estate, Kirkcaldy	KY1 2YX
Highland Car Crushers, 3-5 Carsegate Road North, Inverness	Highland Car Crushers, 3-5 Carsegate Road North, Inverness.	IV3 8DU
Highland Clearance Ltd	Highland Clearance Ltd, Great North Road, Muir of Ord, Ross-shire.	IV6 7XR
Highland Metal Recycling	Highland Metal Recycling, Marko's Yard, Bennadrove Road, Stornoway. Isle of Lewis.	HS2 0DL
HQC Ltd operated by Highland Recycling Ltd	HQC Ltd operated by Highland Recycling Ltd, 24A Longman Drive, Inverness	IV1 1SU
IBP Vehicle Dismantlers	IBP Vehicle Dismantlers 110 Carntynehall Road, Glasgow	G32 6AS
J Dunsmore Recovery Ltd	J Dunsmore Recovery Ltd, Baird Ave, Strutherhill Industrial Estate, Larkhall	ML9 2PJ
J Gordon Williamson Ltd	J Gordon Williamson Ltd, Moycroft Industrial Estate, Elgin	IV30 1XZ
J Noble & Son	J Noble & Son, Randolph Industrial Estate, Kirkcaldy	KY1 2YX
J Noble Auto Salvage	J Noble Auto Salvage, Denburn Road, Kirkcaldy, Fife	KY1 2HD
J R Adam & Sons	J R Adam & Sons, King George V Dock, Renfrew Road, Glasgow	G51 4SD
J S Motors, Station Road, Muirhead, Glasgow	J S Motors, Station Road, Muirhead, Glasgow	G69 9EY
J Walker Scrapyard	J Walker Scrapyard, Shawhill Station Yard, Scotts Street, Annan, Dumfriesshire	DG12 6JG
John Graham Metals Ltd	John Graham Metals Ltd. 8 Munro Road, Springkerse Industrial Estate, Stirling.	FK7 7UU
John Lawrie (Aberdeen)Ltd	John Lawrie (Aberdeen)Ltd, Evanton Industrial Estate, Evanton	IV16 9XJ
John Walker & Son	John Walker & Son, Shawhill Station Yard, Scotts St, Annan.	DG12 6JG
John Williamson (1988) ELV/MR	John Williamson (1988) ELV/MR, The Yard, Manse Road, Kingussie	PH21 1HX
John Williamson (1988) Ltd	John Williamson (1988) Damhead Circle, Dales Industrial Estate, Peterhead	AB42 3GX
Johnston Metals Ltd	Johnston Metals Ltd, 3 Burnett Road, Inverness	IV1 1TF
Kilmarnock Car Breakers	Kilmarnock Car Breakers, 2/6 Old Street, Kilmarnock	KA1 4DS
King Bros	King Bros, Motive Power Depot, Station Street, Stranraer	DG9 7HL
Lowmac Alloys Ltd	Lowmac Alloys Ltd, Oldhall West Industrial Estate, Irvine, Ayrshire	KA11 5AR
Lowmac Alloys Ltd	Lowmac Alloys Ltd, Oldhall West Industrial Estate, Irvine, Ayrshire	KA11 5DG
MB Export	MB Export, 21 Meadow Road, Motherwell, North Lanarkshire.	ML1 1QB
McDonald Metals	McDonald Metals, Cable Road, Viewfield Industrial Estate, Glenrothes	KY6 2SY
McFarlane Bros	McFarlane Bros, Calderside Road, High Blantyre	G72 0TN
McMeekin	McMeekin, Lanark Road, Ravenstruther, Lanark	ML11 8NP
Methven Coachworks	Methven Coachworks, Station Road, Methven, Perth	PH1 3RH
Mossbank Breakers	Mossbank Breakers, Mossbank, by Fettercairn	AB30 1YN
Muirhead Autoparts Limited	Muirhead Autoparts Limited, Unit 2 Woodhead Road Industrial Estate, 50 Woodhead Road, Muirhead	G69 9JB
Mulben Garage	Mulben Garage, Burnside Mulben, Keith.	AB55 6YJ
Overton Garage	Overton Garage, Off Dyce Drive, Dyce, Aberdeen	AB21 0EQ
Paisley Auto Breakers	Paisley Auto Breakers, 49 Scotts Road, Paisley.	PA2 7AN
Paisley Car Breakers	Paisley Car Breakers, 7 Mackean St, Paisley	PA3 1QP
Panda Rosa Metals, Harehill Ind Est, Murcar, Aberdeen	Panda Rosa Metals, Harehill Ind Est, Murcar, Aberdeen	AB23 8BQ
Paxton Metals	Paxton Metals, 18 Greenburn, East Fortune, North Berwick.	EH39 5LE
Perth Auto Recyclers Ltd	Perth Auto Recyclers Ltd, Unit 3, Inveralmond Road, Inveralmond Industrial Estate, Perth	PH1 3TW
R M Supplies (KDY) Ltd	R M Supplies (KDY) Ltd, Caledon East Wharf, Fish Dock Road, Dundee	DD1 3LZ
Randolph Auto Salvage	Randolph Auto Salvage, Randolph Ind Estate, Kirkcaldy	KY1 2YX
Renault Car Spares	Renault Car Spares, Stable Road, Shotts	ML7 5DR
Renfrew Car Breakers	Renfrew Car Breakers, Meadowside Industrial Estate, Meadowside Street, Renfrew.	PA4 8SY
RGS Hutchison and Sons (Metals)	Mr S Hutchison, RGS Hutchison and Sons (Metals), Persley Quarry, Persley, Aberdeen.	AB22 8AP
Rigby Street Car Sales	Rigby Street Car Sales, 17 Rigby Street, Glasgow	G32 6DS
Rosefield Salvage Ltd	Rosefield Salvage Ltd, Lochside Industrial Estate, Irongray Road, Dumfries	DG2 0HS
Ross's Car Sales	Ross's Car Sales, Spares and Repairs, Milton of Clava, Culloden Moors, Inverness	IV2 5EL
Russells Auto Salvage	Russells Auto Salvage, 3/4 Cable Road Viewfield Industrial Estate, Glenrothes	KY6 2SY
S & I Thomson	S & I Thomson, Wheatlands Industrial Estate, Mill Park, Galashiels	TD1 2HD
Seaview Car Dismantlers	Seaview Car Dismantlers, The Braes, Fraserburgh	AB43 9DP
Sharpwood Spares	Sharpwood Spares, Kinnaird, Huntly	AB54 7XT
Shetland Amenity Trust	Shetland Amenity Trust, Garthspool, Lerwick, Shetland	ZE1 0NY
Shewalton Car Spares	Shewalton Car Spares, Oldhall West Industrial Estate, Shewalton, Irvine.	KA11 5AR
Simon Urquhart Ltd	Simon Urquhart Ltd, Orchardbank Industrial Estate, Forfar	DD8 1TD
Speedlift Auto Salvage	Speedlift Auto Salvage, Byne Hill, Mill Road, Girvan	KA26 0HS
Speedy Skip Hire, Sir Archibald Road, Thurso	Speedy Skip Hire, Sir Archibald Road, Thurso	KW14 8HN
Sports Car Breakers	Sports Car Breakers, Claylands, Newbridge Industrial Estate, Newbridge, Edinburgh.	EH28 8LZ
Stanley Clark Ltd	Stanley Clark Ltd, Beechbank, Kennay, Aberdeenshire	AB51 5LL
Stephen Dalton	Stephen Dalton, Station Road, Gogarbank, Edinburgh.	EH12 9BU
Stephen G Dalton	Stephen G Dalton, 52/66 Salamander Street, Leith, Edinburgh.	EH6 7LA
Stewart Melrose (Bathgate) Ltd	Stewart Melrose (Bathgate) Ltd, PO Box 21, Pond Industrial Estate, Bathgate, West Lothian.	EH48 2HZ
Thomas Muir (Metals) Limited	Thomas Muir (Metals) Limited, Den Road, Kirkcaldy, Fife	KY1 2ER
Underwood Car Market, 1-7 Underwood Road, Denny	Underwood Car Market, 1-7 Underwood Road, Dennyloanhead	FK4 1ST
W Stewart & Son	W Stewart & Son, Back Dykes, East Wemyss	KY1 4RY
W&J Allardyce, Hillside Garage	W&J Allardyce, Hillside Garage, Longridge, West Lothian.	EH47 8AN
Watson Skip Hire Ltd	Watson Skip Hire Ltd. Easthouses Industrial Estate, Dalkeith, Midlothian.	EH22 4JD
Waxwing Auto Breakers	Waxwing Auto Breakers, Kingseat Road, Dunfermline	KY12 0SY
West Calder Metals	West Calder Metals, Bungrange Farm, West Calder. West Lothian	EH55 8HG
West Street Motors	West Street Motors, 22 West Street, Dundee	DD3 6SB
Westbank Motods	Westbank Motors, Westmuir, Kirriemuir	DD8 5NA
William Waugh (Edinburgh) Ltd	William Waugh (Edinburgh) Ltd, Granton High Goods Yard, West Harbour Road, Edinburgh.	EH5 1PH
Wm McCormac Henderson & Co Ltd	Wm McCormac Henderson & Co Ltd, Low Beveridge Well Works, 9 Broomhead Drive, Dunfermline.	KY12 9DT
Woodyard Recovery Ltd / R+ R Services	Woodyard Recovery Ltd / R+ R Services, Blairlusk, Alexandria	G83 8NB





**Zero Waste Scotland**

Ground Floor, Moray House, Forthside Way,  
Stirling FK8 1QZ.

E-mail: [helpline@zerowastescotland.org.uk](mailto:helpline@zerowastescotland.org.uk)

Helpline freephone 0808 100 2040

**[www.zerowastescotland.org.uk](http://www.zerowastescotland.org.uk)**