



The Industry Council for research on
Packaging & the Environment

COMPOSITION OF LITTER IN SCOTLAND 2014



Survey carried out by Keep Scotland Beautiful

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2014
Survey by Keep Scotland Beautiful
Commissioned by INCPEN**

INTRODUCTION

In 2013 the Scottish Government consulted on a new national litter strategy, *Towards a Litter-Free Scotland*. The final version of the strategy is due to be published in summer 2014.

Assuming that the strategy follows the approach set out in the consultation, INCPEN is very supportive of its comprehensive approach to tackling all types of litter, incorporating education, enforcement and provision of infrastructure and cleaning.

We also believe it is important to obtain data not only to provide a benchmark against which achievements can be measured but also so that targeted plans can be designed to reduce the incidence of deliberate, thoughtless litter and to clear up careless, accidental littering.

We therefore commissioned Keep Scotland Beautiful to survey a number of representative sites and record the amount and composition of litter in order to provide actual information to help tackle the problem.

AIM

To provide an understanding of the composition and distribution of litter by recording the type and number of littered items in a representative selection of sites.

BACKGROUND

Since 1993 Keep Britain Tidy has carried out a survey of litter for INCPEN as an adjunct to its surveys for Defra. Its work for Defra records type of litter in a selection of 50 metre x 2 metre sites chosen to be representative of the whole of the UK. The surveys for INCPEN counted the number of littered items in a sub-set of the sites, again chosen to be representative.

Because of the high number of cigarette ends and chewing gum only a section of the area was counted and multiplied up to represent those materials for the whole area.

Surveys were carried out again in 1996, 2004 and 2008. Since devolution in 1999 Scottish sites have not been included. A 2014 survey of England and Wales is being carried out by Keep Britain Tidy.

SURVEY METHOD

Keep Scotland Beautiful uses the same methodology as Keep Britain Tidy for its presence/absence surveys and has used the same method for this litter count. A survey of 120 sites (30 each in Edinburgh, Falkirk, Renfrewshire, Inverness) was carried out between Dec 2013 and February 2014.

Sampling was split between land use types defined in the Code of Practice for Litter and Refuse (Scotland) 2006:

- Zone 1 Town centres, major transport routes, education centres > 1000 students/pupils
- Zone 2 High density residential areas, education centres < 1000 students/pupils
- Zone 3 Low density residential areas
- Zone 7 Rural roads linking towns and villages

RESULTS

NUMBER OF ALL LITTER ITEMS

Type of litter	number of items	% of overall litter
Cigarette ends	1982	35.5%
Cigarette litter	62	1.1%
Matches	63	1.1%
Other smoking related	94	1.7%
TOTAL SMOKING	2201	39.4%
Soft drink cans	103	1.8%
Drinks cups	42	0.8%
Drinks carton	35	0.6%
Plastics soft drinks bottles	92	1.6%
Soft drink bottle tops	21	0.4%
Drinking straws	26	0.5%
Other drinks related	11	0.2%
TOTAL NON-ALCOHOLIC DRINKS	330	5.9%
Alcoholic drinks cans	13	0.2%
Alcoholic bottle tops	8	0.1%
Glass alcohol bottles	4	0.1%
Other	4	0.1%
TOTAL ALCOHOLIC DRINKS	29	0.5%
Confectionery packaging	177	3.2%
Lolly/ice cream related	4	0.1%
Snack packaging	14	0.3%
Fast food packaging	54	1.0%
Food and drink	5	0.1%
other	5	0.1%
TOTAL food packaging and food	259	4.6%
Gum staining	2480	44.4%
Gum wrappers	20	0.4%
Solid gum	18	0.3%
TOTAL gum	2518	45.1%
ATM slips	1	0.0%
Lottery related	4	0.1%
Till receipts	15	0.3%
Travel tickets	7	0.1%
Post Office elastic bands	16	0.3%
Supermarket bags	8	0.1%
Other retail bags	18	0.3%
Newspaper/magazines	15	0.3%
Other paper	25	0.4%
Paper tissues	44	0.8%
clothing	4	0.1%
Warehousing	3	0.1%
Dog faeces	13	0.2%
Bagged dog faeces	1	0.0%
General packaging	5	0.1%
Commercial packaging	5	0.1%
Other litter	68	1.2%
TOTAL mixed	252	4.5%
TOTAL LITTER	5589	100%

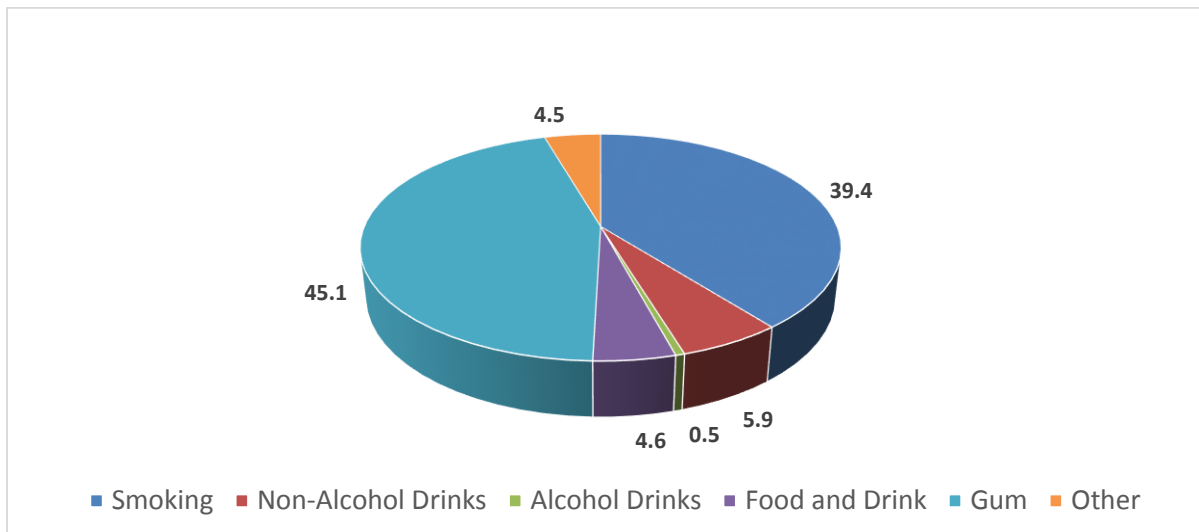
We appreciate that a count of littered items does not distinguish between 'freshly-thrown' litter and accumulated litter. Chewing gum and cigarette ends are particularly difficult to clear and therefore do accumulate. As do Post Office rubber bands.

The table below shows the results without gum and cigarette ends to give an indication of the number and type of items that are larger and therefore more visible. It should be noted though that while they are more visible, they are also the items that are easier (and cheaper) for councils to pick up.

NUMBER OF LITTER ITEMS WITHOUT CIGARETTE ENDS AND GUM (SOLID AND STAINING)

Type of litter	number of items	% of overall litter
Cigarette litter	62	5.6%
Matches	63	5.6%
Other smoking related	94	8.5%
TOTAL SMOKING RELATED (without ends)	219	19.7%
Soft drink cans	103	9.3%
Drinks cups	42	3.8%
Drinks carton	35	3.2%
Plastics soft drinks bottles	92	8.3%
Soft drink bottle tops	21	1.9%
Drinking straws	26	2.3%
Other drinks related	11	1.0%
TOTAL NON-ALCOHOLIC DRINKS	330	29.8%
Alcoholic drinks cans	13	1.2%
Alcoholic bottle tops	8	0.7%
Glass alcohol bottles	4	0.4%
Other	4	0.3%
TOTAL ALCOHOLIC DRINKS	29	2.6%
Confectionery packaging	177	16.0%
Lolly/ice cream related	4	0.4%
Snack packaging	14	1.3%
Fast food packaging	54	4.8%
Food and drink	5	0.4%
Other	5	0.4%
TOTAL food packaging and food	259	23.3%
Gum wrappers	20	1.8%
ATM slips	1	0.1%
Lottery related	4	0.4%
Till receipts	15	1.3%
Travel tickets	7	0.6%
Post Office elastic bands	16	1.3%
Supermarket bags	8	0.7%
Other retail bags	18	1.6%
Newspaper/magazines	15	1.3%
Other paper	25	2.3%
Paper tissues	44	4.0%
Clothing	4	0.4%
Warehousing	3	0.3%
Dog faeces	13	1.2%
Bagged dog faeces	1	0.2%
General packaging	5	0.5%
Commercial packaging	5	0.5%
Other litter	68	6.1%
TOTAL mixed	252	22.8%
TOTAL LITTER WITHOUT GUM AND CIGARETTE ENDS	1109	

**OVERALL LITTER BY CATEGORY
Percentage**



The most frequently found litter over the 120 transects was smoking related (39.4% of which 90% was cigarette ends) and gum (45.1%, almost all adhered to the hard surface). On average, for every 200m² of hard surface, 16.5 cigarette ends were found, increasing to 30.3 in town centre areas. A similar trend is observed for gum with almost three times as many gum items counted in town centre areas (45.2 items per 200m²) compared to any other land use type.

Despite gum and smoking litter being the most commonly counted items, it was found that larger litter items that have a more significant detriment on the visual appearance of the local environment were also commonly observed. For example, almost three soft drinks related items were observed per 200m², a number skewed on roadside verges where it increased to around nine.

Alcohol related items were much less frequently observed, with only 29 counted, making up only 0.5% of the total litter items. A third of these were also found to be small and generally unnoticeable such as bottle tops and ring pulls.

DATA USED IN CONSULTATION ON THE LITTER STRATEGY

The consultation on *Towards a Litter-Free Scotland* referred to a study commissioned by Zero Waste Scotland, ZWS - *Scotland's Litter Problem: The Scale and Cost of Litter and Flytipping* which stated that there are no sources of information from actual surveys of the composition of litter.

The ZWS study therefore made an estimate of amounts of litter based on the composition of municipal waste. Data was calculated by weight of material type because municipal waste is measured by weight.

However this is not a useful measure of litter. The weight of litter is usually irrelevant because, for example, 40 grams of plastic could be either 1 bottle or 12 yogurt pots.

To effectively tackle litter it is essential to know the number of items that must be picked up, and how difficult that task is.

CONCLUSIONS

With or without gum and cigarette ends, the results show that littering of all items needs to be tackled. Addressing just some items will not clean an area and may therefore encourage more irresponsible behaviour.

There is considerable evidence that even one piece of litter makes an area appear uncared for and can encourage further littering.

The results also show that a piecemeal approach to the problem focusing on just a selection of items will not solve the litter problem. Deposits on drinks containers (cans, bottles and cartons) for example would target only 4.3% of litter. That would leave 95.7% unaffected.

Even with gum and cigarette ends excluded, the total potentially deposit-bearing litter amounts to just 22.4% leaving nearly 80% that would have to be addressed in some other way.

KEEP SCOTLAND BEAUTIFUL - Keep Scotland Beautiful is the independent charity which campaigns, acts and educates on a range of local, national and global environmental issues which affect people's quality of life. It is committed to making Scotland clean and green, today and tomorrow.

It is Scotland's leading force acting, campaigning and training others to clean up local environments and to change the behaviour which blights our urban and rural landscape. Clean Up Scotland aims to reduce litter in time for Scotland to host global events in 2014, and the Local Environmental Quality Network aims to achieve similar goals working with local partners; Beautiful Scotland and It's Your Neighbourhood reward success in improving communities; and the Blue Flag and Seaside Awards recognise quality in Scotland's beaches.

INCPEN - The Industry Council for research on Packaging & the Environment – was established in 1974 to study the environmental and social impact of packaging. It draws together an influential group of companies that operate throughout the supply chain and share a common interest in packaging, the environment and sustainable development.

INCPEN has campaigned against littering for many years and has been a member and supporter of Keep Britain Tidy since the 1970s. It has commissioned numerous pieces of research to better understand the issue. It encourages its members and other companies to use the Tidyman logo or an adaptation of the Tidyman on products likely to be used outdoors. Anti-littering messages are a key part of INCPEN's highly respected materials for schools.

INCPEN supports Keep Scotland Beautiful and Keep Britain Tidy's view that preventing litter needs a comprehensive approach that includes educating people, provision of infrastructure, effective cleaning and law enforcement.

March 2014