

Scotland's Litter Problem

Quantifying the scale and cost
of litter and flytipping





Introduction

Tackling litter and flytipping is an integral part of achieving a zero waste society – a society where the value of resources is recognised, we use (or reuse) them more efficiently, and where they are recycled rather than thrown away, retaining value in Scotland’s economy. Litter and flytipping impose significant financial costs on national and local government, businesses, and other organisations, many of which are ultimately borne by the public, either as taxpayers or customers. Litter and flytipping represent waste that is disposed of illegally and irresponsibly, and – because there is significant potential to recycle these materials – tackling the problem is central to the ethos of a zero waste society.

In the course of 2013, the Scottish Government is consulting on and developing a strategy to tackle litter and flytipping more effectively. To inform this process, and supported by the Scottish Government, we began a programme of research to identify:

- how much littering and flytipping takes place in Scotland;
- what waste types litter and flytipping is made up of,
- what litter and flytipping costs Scottish society each year,

- what is known about the causes of the problem (specifically in relation to littering); and,
- evidence on effective countermeasures.

This report summarises that research programme. Some areas relating to this issue are better evidenced than others. Therefore this report highlights both what we know, and what we don’t know.

Two independent studies were commissioned to inform this report and are published alongside it for readers wanting more detail.



These are studies by Brook Lyndhurst, *Rapid Evidence Review of Littering Behaviour and Anti-Litter Policies*, and Eunomia, *Exploring the Indirect Costs of Litter in Scotland*. In addition, Eunomia conducted survey work with Scottish local authorities to better understand litter and flytipping costs and estimates of waste volumes. Environmental charity Keep Scotland Beautiful also provided assistance in collecting information on current local authority practice and community initiatives.

Both litter and flytipping can be considered as “waste in the wrong place”, but littering relates to the wrongful disposal of single items (e.g. a crisp packet, or drinks can), whereas flytipping relates to the disposal of larger amounts of waste. This report's facts and figures focus on waste in the wrong place (and therefore exclude rubbish that is correctly deposited in public “litter” bins, and the costs of dealing with leaves and other naturally occurring material). And while the consequences of litter and flytipping may be similar – unsightly waste which has expensive consequences – the behavioural drivers and counter-measures required are not.



Quantifying the problem

How much litter and flytipping waste is there?

- At least 15,000 tonnes (t) of litter is disposed of into our urban and rural environment and is subsequently cleared by local authorities every year.
- This equates to approximately 250 million easily visible items every year.
- Over 80% of the litter stream consists of potentially recyclable material and indeed 50% of this material could have been easily recycled, had it been properly disposed of.
- At least 26,000t of waste is illegally flytipped each year and dealt with by local authorities, with an estimated 61,000 incidents occurring per year. This estimate excludes the vast majority of cases occurring on private land.
- The total amount of litter and flytipping is higher than this. There is currently no data available on the amount of litter cleared from private land. And it is also the case that in some instances, material can lie uncollected (and uncounted) for long periods of time.



61,000 number of flytipping incidents each year



What are the direct costs of tackling litter and flytipping?

Based on the Eunomia survey, this report identifies the following direct costs of dealing with and minimising litter and flytipping:

- Scotland spends at least £53 million of public money on litter and flytipping each year.
- The vast majority of identified spend comes from local authorities. Local authorities spend £45 million on clearance (just over £36 million for litter, and £8.9 million for flytipping), £6.5 million on enforcement (£4.5 million for litter, and £2.0 million for flytipping), and £0.86 million on education and awareness (almost all relating to litter).
- Other public bodies, including other duty bodies identified, spend at least an additional £1 million on activities associated with litter and flytipping.
- Private sector costs cannot be systematically calculated, though some illustrative examples are given in the main report.
- The value of resources thrown on the ground as litter is estimated to be £1.2 million. The extent to which this was recoverable would depend on how material was collected if it was not littered.
- The value of resources in the flytipping stream cannot be quantified, due to a lack of detailed data.



£53 m

Amount of public money spent on tackling litter and flytipping each year in Scotland

What are the indirect costs of litter and flytipping?

- Indirect costs are the negative impacts or consequences of litter that impact on society more widely with the implication that someone, somewhere, is paying them.
- Looking at the evidence presented, we have concluded indirect costs are likely to exceed £25 million, and it is not unreasonable to suggest that they could be much higher.
- Further costs might reasonably be associated with marine litter – over £10 million of the total £17 million costs identified in a separate analysis by Marine Scotland seem highly likely to be additional to the above estimate, and the Marine Scotland estimate as a whole is stated to be a low end figure.
- Therefore the combined costs of terrestrial and marine litter are highly likely to exceed £35 million, and could be much greater.

Litter can have an impact on our health and wellbeing, crime, wildlife, and our environment





Scots would pay an estimated

£73 million

per year for litter-free neighbourhoods

The true value of a litter free environment

- The Eunomia study also looked at the value Scots place on a litter-free environment. Unlike the costs represented above, these numbers show what the population might be 'willing to pay' for a cleaner environment. These figures demonstrate value – what people believe something is worth to them.
- The value placed by the population on litter-free beaches was identified between £50 million and £100 million.
- A conservative estimate of how much Scots value litter-free neighbourhoods would be £73 million a year. Other estimates identified in the course of this research are much higher.
- Based on those two figures, it seems reasonable to conclude that overall, the value Scots would place on a cleaner Scotland can be conservatively estimated at at least £100 million.

Causes and countermeasures

In considering behaviours, this report focuses specifically on litter rather than on flytipping. Littering is generally the result of small-scale individual actions, sometimes deliberate, but often lazy or thoughtless. Flytipping is commonly accepted to be associated with wilful criminal activity.

Who litters?

- No single group or demographic are inherent “litterers”. Around half the population admit to having littered “at some point”, whether deliberately, accidentally, or simply without thinking.
- Though some demographic groups are more likely to litter, they may be motivated to do so by particular circumstances that they find themselves in.
- The vast majority of litter in Scotland is judged to have arisen from the general public (in 98% of areas surveyed). While certain business types (such as fast food outlets) are commonly associated with litter arisings, the general public are typically responsible (deliberately or accidentally) for transferring this packaging into our environment.

Why do people litter?

The Brook Lyndhurst review identified a wide variety of potential causes of littering behaviour.

Individual factors frequently cited as causes of littering include:

- people’s perception of space (if it is seen as “clean” and “cared for” littering is less likely);
- the item in question, with some people more likely to litter items they think (wrongly) do not ‘count’ as litter (such as an apple core), or that they wish to “get rid” of quickly; and,
- laziness and the inconvenience of using an available bin or taking waste home.

In practice, most littering actions are habitual, rather than the result of a conscious decision.

Social factors are influenced both by what people see (the state of the location they are in, and the behaviour of others) and what people believe is expected of them (the extent to which they think the issue matters to wider society).



The most obvious **material factor** in the context of litter is bin provision. Adequate provision of well serviced facilities can certainly reduce the incidence of littering. But littering still occurs in well provisioned areas, so they should not be considered the whole solution. More broadly, people's perception of how clean a place is is of course partly dependent on the general condition and maintenance of that place.

What countermeasures work?

Education and awareness covers a wide range of activity from small-scale local initiatives (perhaps in the context of a single school) to national communications campaigns (which have been undertaken in a number of countries). Communications activities can be significant in ensuring the public understand the negative consequences of litter, and that littering actions are considered socially unacceptable. Communications can also play

a key role in enforcement, where awareness is a key component of effective deterrence.

The infrastructure most commonly referred to was bins. The introduction of new technology such as electronic monitoring and reporting of fill levels has the potential to provide improved evidence that could help organisations optimise the deployment of bins. This may in turn enable those organisations to maximise the value of captured materials and potentially reduce servicing costs. However, the provision of bins is not, in itself, the solution to the problem.

Infrastructure changes can also include quite different measures. Opportunities to litter can be reduced by packaging changes, whether at a local level (e.g. a specific retail outlet) or via national initiatives.

In the context of flytipping, infrastructure such as physical barriers and CCTV have also proven effective at individual sites.

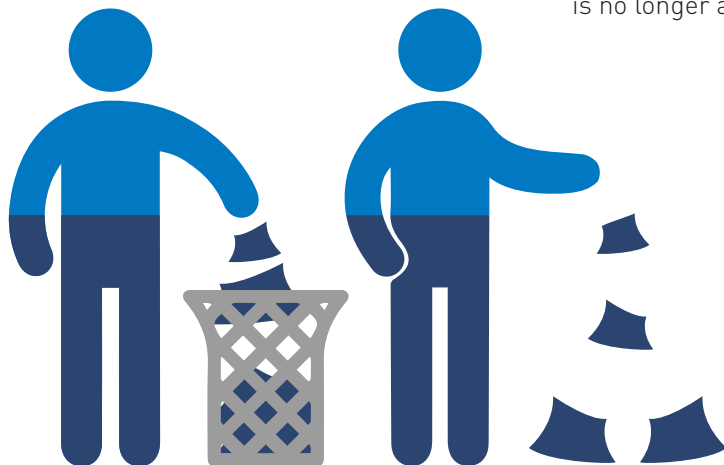
Enforcement is another common anti-litter measure. While data on enforcement measures is easily obtained, the true value of enforcement is when it deters future offending. The deterrent value relates to both the size of penalty, and also to people's expectation that they will be caught and punished. Ultimately, the success of an enforcement regime should be measured by the extent to which it deters littering.

Finally, measures to better understand littering and flytipping frequency and locations aid both prevention and enforcement.

What is being done?

Action is already being taken to control litter in Scotland – by government, local authorities, public bodies, charities, community groups, and individuals – and via a wide variety of methods, including the full range of education, enforcement and infrastructure options currently available. Without these efforts, the scale of Scotland's litter problem would be far larger.

However, as this report indicates, current activity still leaves us with a significant problem with hundreds of millions of littered items, tens of thousands of flytipping incidents, and tens of millions in associated direct and indirect costs. The Scottish Government's National Litter Strategy will support a clean, safe environment for people who live in and visit Scotland - where littering is no longer acceptable.



Over half the population admit they have littered at some point

Conclusions

Scots value a litter free environment very highly – at over £100 million a year. And yet, at least 250 million items are littered every year, and over 61,000 flytipping incidents occur. The direct cost to the public is over £50 million, which includes costs associated with cleaning public places, enforcement and education. Local authorities foot the bill for the vast majority of this spend. Though not quantified in this report, the clean-up bill for other organisations is also likely to be significant.

The wider impacts on our society, economy and environment are even greater. This report conservatively estimates that the hidden costs

of litter to public services, individuals and wildlife will exceed £25 million, and suggests that they may in fact be much greater.

This report also identifies a range of potential countermeasures, covering education, infrastructure and enforcement activities. Some of these have been shown to work in practice, others are promising, but have yet to be tested on a larger scale. The Scottish Government's National Litter Strategy will identify interventions to be taken forward for further investigation, and Scottish Government will consult on its proposed approach during 2013.



Get in touch

To find out more about how you can help us create a zero waste society in Scotland, please contact us.

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