

Report

January 2015

Public perceptions and concerns around litter

Qualitative insight research



BROOKLYNDHURST

Zero Waste Scotland works with businesses, individuals, communities and local authorities to help them reduce waste, recycle more and use resources sustainably.

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The authors acknowledge the valuable support of Lucy Stroud (Brook Lyndhurst) and Emma Leel (Zero Waste Scotland) in preparing and managing photographs.

They would also like to thank all those who took part in the research.



This report represents the views of the participants, with occasional commentary from the research team. It does not therefore represent the views of the research team, Zero Waste Scotland or Scottish Government.

Applying the Insights: a Foreword by Zero Waste Scotland

Zero Waste Scotland commissioned this research for two main reasons. Firstly we wanted to understand how the public experience the litter problem - how they perceive litter, how they feel about it, what matters most to them and why. We knew from other work that it is one of the neighbourhood problems that the Scottish population are most concerned by, but we were interested in identifying the locations and contexts that were of most concern, to help inform and prioritise future work.

Secondly we wanted to understand how people talk about and describe the problem. This will inform both communications – there is plenty of evidence elsewhere that more targeted, relevant language can make interventions more effective – but also measurement, where public surveying is often used, but the responses can sometimes be ambiguous.

We chose a qualitative research methodology to maximise the insight into what people think and feel and why, and to get beyond first impressions. We discounted a quantitative approach on this occasion because while survey results would have given some “clear” headline numbers, the relative significance of people’s responses, and the intensity with which some views are held, would have been hidden.

We’re pleased with the results, but they paint a complex picture, and careful thought will be needed to apply the lessons with maximum effect. The main ways in which we propose to use this research are set out below, and the results will help inform our thinking across the whole range of our programme activity as we move forwards:

- As part of the national litter strategy, Zero Waste Scotland is tasked with supporting partners to pilot and deliver anti-litter interventions in 2014/15, and beyond. Some of the insights from this work are already informing those discussions – for example highlighting the value of context-specific messages, or the extent to which the impacts of some litter types (eg banana skins and apple cores) may be underestimated by the public.
 - There are some other interesting lessons that we will use to inform communications around our interventions. For example, the benefits of prevention, as against effective clear up, may be less well understood by the public, with litter clearance being frequently praised and people seeming less concerned about places that they know are regularly cleaned. As a result, the littering problem perhaps seems less important in these areas. Challenging this perception in communications may be a valuable engagement tactic.
 - Similarly, people’s perceptions of litter on the ground are strongly influenced by why they think it is there – it is less the item itself than the (perceived) backstory of how it got there that most angers the public. Leveraging that factor in communications may be difficult, but would undoubtedly provide a good way to “cut through” and get communications noticed. And challenging backstories that focus the blame on “others” may be a useful way to get people to reassess their own behaviour.
 - Zero Waste Scotland will be reviewing and updating best practice guidance for local authorities and other stakeholders as part of the national litter strategy. This research suggests some priorities from the public (both in terms of litter types, and locations that concern people most) – but also that these are context specific, and people’s views may change quite easily when they speak with others, or are presented with new evidence. Any prioritisation may therefore often be a localised decision.
 - At the same time, clearer communication of the impacts of litter might influence the results of any public consultation significantly – information was presented as neutrally as possible in the discussion groups undertaken for this research, but nonetheless, participants were seen readily changing their views in conversation with others. We will factor in these issues and how they can be addressed, when planning the review and updating of guidance.
 - The research will also inform our work on designing better and more cost-effective litter monitoring methodologies – which is currently a significant challenge when assessing interventions. We are
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not interested in monitoring the problem just for the sake of it – getting a clear picture allows us to manage the issue better, at both local and national levels, and ensure we only invest in solutions that work.

- This research suggests that the public are good at identifying local “blackspots” and this knowledge could be used at the local level to target clear up and prevention activity for maximum impact on the local community. However, the level of detail the public register about the problem in more general terms is more variable, and may change over time independently of the problem itself (for example, some participants in our research noticed litter more as a result of taking part). This places a limitation on using a “before and after” perceptions survey based around an intervention to measure change, as responses may not be consistent.
- Perhaps most interestingly, the insights from this report could also inform design of litter monitoring tools that volunteers or community groups can use to monitor and tackle the problem (a “citizen science” approach) and this is something we will explore further.

This is a technical report, but well worth reading for those with an interest in how the public see and respond to the litter problem. It’s an excellent addition to a growing body of evidence on the litter problem in Scotland, and also links to research being conducted elsewhere. One of Zero Waste Scotland’s priorities over the next year is to ensure that all the available evidence is communicated to partners in a relevant and timely way, and the current report contains several of the key insights we will be seeking to share. So, for practitioners without the time to read the whole report – keep watching this space.

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Executive summary

Background and aims

Zero Waste Scotland is conducting a programme of research to support the development and implementation of the Scottish Government's national litter strategy. Previous research has looked at who litters and why, the extent of littering, and the direct and indirect costs associated with dealing with the problem.

This latest piece of research was designed to generate a better understanding of how litter is experienced by the public - how they perceive litter, how they feel about it, and what matters most to them. To generate insight on public perceptions around nuisance and disamenity from litter the study covered:

- **Types of litter and locations** – to identify which situations are most noticeable, or least acceptable
- **Amounts** – to identify what is understood by terms such as 'heavily littered' and what would be perceived as 'an improvement'
- **Priorities** – to provide insight on where the public would like efforts on prevention and clear-up to be focused

Litter was defined as "waste in the wrong place" but the study also touched on issues that the public tends to see as closely related to litter, notably dog fouling and flytipping of household waste or large domestic items.

The research will help inform future interventions, and also provide insight into how improvements can be cost-effectively measured over time.

This report represents the views of the participants, with occasional commentary from the research team. It does not therefore represent the views of either the research team, Zero Waste Scotland or Scottish Government, though it will be valuable in informing future activity.

This summary first explains our choice of research method (A), and then goes on to discuss how people perceive and talk about litter in general terms (B), and their attitudes to it (C), before considering how perceptions and concerns differ in different locations, and for different types of litter (D). We then summarise what we have learnt about how people grade the litter problem, and talk about improvements (E). Finally we propose a potential prioritisation of issues in the minds of the public (F), though this should be interpreted with caution, for the reasons identified in the appropriate section.

A. How was the research undertaken?

A qualitative research approach was preferred to a statistically representative survey because of its ability to get below the surface of first responses and to unpack the complex bundles of factors that shape public perceptions of litter problems. It helps us to obtain considered responses, and see how people react to actual situations, prompted both by photographs, and the experience of others. We can see why people hold the concerns they do, in a way that would not be possible from a survey approach alone.

A carefully balanced sample of 113 people took part in 12 discussion groups in six locations across Scotland. Participants also completed short pre-task and post-task surveys and took photos of their local area during the pre-task so that discussions in the groups would be grounded in real, and recent, experience.

In addition to standard qualitative research approaches a card sorting method rooted in psychology was used to explore how participants conceptualise litter problems and categorise different situations.

While the findings provide robust and detailed insights into litter perceptions in Scotland, they cannot provide a quantitative account of the extent to which these views are held across the Scottish population as a whole (which is where a quantitative survey would be needed).

B. Factors that shape perceptions – how do people experience litter in their day to day life?

The Scottish Household Survey shows that litter is one of the forms of anti-social behaviour that most concerns the public (with 29% of the population identifying it as “very” or “fairly common” in their neighbourhood in 2012). It also suggests significant differences between locations and social groups in their experience of the problem.

The more qualitative approach undertaken in this study suggests a more complex picture. Initially litter does not appear to be a significant concern for most people on a day to day basis. This difference appears to be driven by two main factors – firstly that in our study the generally effective and rapid clean up efforts by local authorities meant litter was often classed as a “temporary” problem, and secondly that people may become “immunised” to litter where it becomes seen as a normal feature of experience. Our research also showed that concern and engagement was much higher when the problem was discussed with concrete examples (e.g. pictures of real littering incidents) rather than in general abstract terms, and that often it was the act of littering (i.e. the behaviour) rather than the actual items themselves that caused most irritation or anger.

The lower apparent concern in the qualitative research appears to be largely because the problem is currently managed effectively so that people do not feel they have to worry about it. For several participants engagement in our research had highlighted the otherwise perhaps unnoticed work that local authorities (and others) do in this regard. There is a general expectation that litter will be cleared up quickly when it occurs, and is thus generally only a temporary problem, except in some ‘out of the way’ locations (e.g. roadsides and lay-bys) where people are uncertain who is responsible or how often cleansing happens.

It is worth noting that in practice current management does cost the public a significant amount – local authorities spend £36 million on litter clearance, and a further £4.5 million on enforcement every year. Previous research also suggests significant wider hidden costs to the public, and our environment. People may therefore have a somewhat false impression of the scale of the problem, especially if they are unaware of the wider costs. In the absence of this clean up service, and with current littering behaviour, litter levels would quickly deteriorate, and this might fundamentally change public perceptions.

Another factor accounting for lower than expected levels of immediate concern was that many participants reported they have become immune to litter in the places they pass through on a daily basis. A small number of participants reported they do regularly experience disamenity from litter, flytipping and dog fouling where they live, including those from more deprived areas, a pattern in line with the SHS.

This day to day perception does not mean people are unconcerned by the problem. While everyday awareness of litter may be low, people can become quite animated, emotional and judgemental when litter is brought to their attention, as witnessed in participant responses to photo prompts in the discussion groups (which elicited a far more passionate level of engagement than more abstract parts of the discussion groups). Taking part in the research appeared to raise awareness of litter, including a sizeable minority of participants who said they now register more when they are out and about.

Litter experiences can depend on the time of day or year when people are out and about. Participants often associated ‘night time economies’, secondary school lunchtimes or sunny days at the beach with large amounts of litter. In some cases this may reflect absolute levels of littering, whereas in others it may reflect the extent to which people notice the problem more.

Earlier research suggested that littering behaviour was highly context dependent, and we would now suggest that perceptions of the litter problem are also context dependent.

The possibility that engagement with the issue may lead to people noticing more litter than they had previously, and of opening up potentially emotive responses, must be borne in mind by those designing litter communications, and poses a challenge to those designing measures to capture public perceptions of improvement.

C. Factors that shape perceptions – how do people's beliefs and attitudes shape reactions?

Behaviours and underlying attitudes also influence how litter is perceived in different settings.

The findings confirmed other research showing that more people litter than are prepared to admit to it openly; and that littering behaviours are often rationalised to avoid feelings of guilt (e.g. 'it's only small bits', or 'there weren't any bins')¹. Key influences on perceptions of litter include:

- Those relating to who you are, and how you see yourself, such as:
 - Whether you drop litter yourself
 - Whether you have dogs or children (sensitivity to hazards)
 - Whether a sense of pride in where you live is important to you, either your own street or home town generally
- Those relating to your perception of the incident in question, such as:
 - Whether you consider the act of littering (that has led to the litter you see) to have been deliberate, as opposed to 'accidental' or 'unavoidable'
 - What judgements you make about the kinds of people you believe are responsible for littering

This latter factor in particular can mean that a similar item may attract very different responses in different (perceived) circumstances – we can't tell how or why a specific item (such as a drinks can on the grass in the park) got there, but we instinctively place it in the context of the wider environment (what infrastructure is in place, who uses the space, who might have dropped it, and did they do it deliberately) in deciding how much of a problem it is.

These influences feed into perceptions of whether the litter that people see is felt to be 'normal' or 'standard' or - at the other end of the spectrum of the language used by participants - 'unacceptable', 'a disgrace', 'disgusting' or 'out of order' (this is a small selection of the terms expressed). These words (rather than descriptive terms relating to amounts) highlight that litter is experienced in context as a symptom of (perceived) behaviour, rather than as an objective, standardised problem relating to amounts.

A further crucial influence on perceptions comes from the narratives that participants routinely imagine to explain why a litter situation may have come about, or what might happen next.

These narratives appear to influence how strongly participants felt about the disamenity they experience from particular litter situations. Without thinking it consciously, they may experience various littering incidents as being done to them personally (as reflected in feelings of offence about 'deliberate' littering), as opposed to making a more abstract appraisal of the impact of litter on the visual appearance of a particular place.

Because of these various underlying influences it became apparent that the same type and amount of litter may be perceived and described differently in different situations, or by different people in the same situation. This is evidently a challenge for those devising measurement approaches to take on board.

Any communications to engage the public in litter prevention will also need to be mindful of these story-telling dimensions which extend far beyond the items and amounts of litter themselves.

¹ Brook Lyndhurst (2012) Rapid Evidence assessment of littering behaviour and anti-litter policies. Zero Waste Scotland.

D. Perceptions of litter situations – places and types

Responses to litter of various types, and in various locations, were probed during the research. The table below captures a selection of the key perceptions and insights about each of the litter situations that were explored (detail is provided in section 3 of the main report).

It is important to bear in mind that the table represents the perceptions of people who took part in the research and not statements of fact about particular litter situations. This also accounts for the conceptual overlap (and omissions) in some of the comments – they reflect what participants told us.

Places where litter occurs: how is the problem perceived?		
Residential	<ul style="list-style-type: none"> • Most do not see it as a problem – because streets are largely kept clean • But low tolerance to any litter seen 	<ul style="list-style-type: none"> • More tolerance near town/city centres • Residents expected to play their part in many areas – tidy gardens, picking ‘small bits’
Town & city centres	<ul style="list-style-type: none"> • Where litter is seen most – but also where people may be most immune to noticing it • Often stated worst at night, associated with drinking & late night eating 	<ul style="list-style-type: none"> • Food related, cigarette butts & gum • Experience and expectation of rapid cleaning which removes concern • Lack of bins/distance to bins from where litter arises sometimes mentioned
Local parks & recreation areas	<ul style="list-style-type: none"> • Parks & places for ‘everyday’ walks are part of a ‘nice place to live’ • Litter spoils enjoyment of leisure 	<ul style="list-style-type: none"> • Concern about hazards – dog fouling, broken glass • Lack of/full bins often blamed
Scenic – beaches	<ul style="list-style-type: none"> • Type matters as much as amount • Hazardous litter is most upsetting 	<ul style="list-style-type: none"> • Seasonal/weather-related problems • Some people report improvement in last few years
Scenic – countryside	<ul style="list-style-type: none"> • Even small amounts are unexpected – seen as ‘a lot’ and ‘out of order’ • Litter spoils ‘a nice experience’ 	<ul style="list-style-type: none"> • But these are less visited places (and perhaps have less litter) so less concerning, except for those who care about sense of pride for visitor areas
Roadside and lay-bys	<ul style="list-style-type: none"> • Associated with ‘on the go’ snacking and flytipping • Car parks as well as lay-bys and verges 	<ul style="list-style-type: none"> • Some concern about how long litter will remain and risk of attracting more leading to unacceptable accumulation
Types of litter: how do people view the problem?		
Cigarette butts & cartons	<ul style="list-style-type: none"> • Described as ‘everyday’, ‘everywhere’ litter – people may become ‘immune’ to seeing it • Associated with town and city centres, especially around pubs, offices, eating venues etc. – perception this may have got worse as smokers now have to smoke outside 	<ul style="list-style-type: none"> • Opinion divided over acceptability of behaviour or impact • Some won’t carry to a bin; some incorrectly see drains as acceptable disposal route
Chewing gum	<ul style="list-style-type: none"> • Also ‘everyday’ litter • Really annoying for some, not an issue for others 	<ul style="list-style-type: none"> • Some sense of people becoming immune to seeing it • Concern about the cost-effectiveness of clean-up
Food & drink on the go¹	<ul style="list-style-type: none"> • Reckoned to be a significant problem • “Kids” typically blamed • Effective cleaning mitigates level of concern 	<ul style="list-style-type: none"> • The behaviour is often as upsetting as the litter itself • Some people admit throwing food-related litter from cars (in contrast to most other behavioural areas that came up in the groups)

Glass bottles & broken glass	<ul style="list-style-type: none"> Concern is about hazard and not amount Especially in parks, beaches & other recreation spaces 	<ul style="list-style-type: none"> Upset not only about the litter but also attitudes and behaviour of those assumed to be responsible – tied up with wider feelings about young people
Drug-related litter	<ul style="list-style-type: none"> Very distinct from normal litter Strong visceral reactions – though items not typically seen in daily life 	<ul style="list-style-type: none"> Strong reactions were most likely primed by the pre-task survey Local news stories and ‘my friend’ accounts also fuel concerns
Plastic carrier bags	<ul style="list-style-type: none"> Most noticeable at roadsides & lay-bys Filled, dumped bags more annoying than ‘windblown’ bags 	<ul style="list-style-type: none"> Did not appear to be a big concern compared to other items – except for fly-tipped waste in carrier bags
Newspaper & scraps of paper	<ul style="list-style-type: none"> Not usually differentiated from general everyday litter 	<ul style="list-style-type: none"> Exception was paper left behind after domestic refuse collections: where it happens it can be very annoying
Banana skins, apple cores etc.	<ul style="list-style-type: none"> Least likely to be considered litter Even some who are most opposed to littering find it acceptable in green spaces and may drop it 	<ul style="list-style-type: none"> Perception of lack of hazard from its bio-degradability is key to attitudes (this misperception is discussed in more detail in the main text) Bio-degradability never mentioned with respect to other food-related litter

Other items usually mentioned as belonging to the litter problem

Dog fouling	<ul style="list-style-type: none"> Always mentioned: seen as inseparable from litter as an amenity problem Discarded dog poo bags are also a concern and widely reported 	<ul style="list-style-type: none"> Rated a significant problem where it occurs in residential areas and everyday leisure spaces
Flytipping	<ul style="list-style-type: none"> Considered different from litter – because of intent behind it Assumption of deliberate intent and forethought makes it feel outrageous 	<ul style="list-style-type: none"> Dumped bags of household rubbish are upsetting, as well as single large items Charged-for bulky-waste collections often flagged as cause/excuse

It is worth reiterating that perceptions around apple cores and banana skins do not necessarily match the true impacts of these items.

Perceived categories and dimensions of litter ‘problems’ that emerged from the card sort exercise (based on places and items above) were:

Types of litter:

- Hazards – drug-related litter and broken glass elicited the strongest emotional reactions and highest levels of concern, irrespective of the actual frequency with which people encountered them
- Everyday, everywhere litter – fast food-related litter, drinks cans and bottles, sweet and crisp wrappers, and scraps of paper were frequently grouped together
- Chewing gum and cigarettes – although seen as everyday litter, there were often perceived as slightly less annoying

Locations litter occurs:

- Places that are used regularly for recreation (beaches, countryside, parks, local paths, riverside walks etc.) – litter spoils participants’ enjoyment of their leisure
- Roadside litter – not encountered everyday, concern about accumulations of litter, uncertainty who ‘owns’ the problem, specific anti-social behaviour

- Flytipping – a serious concern in residential areas - real for some (who want it cleared up) and hypothetical for others (who want to know it won't happen to them); felt to be socially unacceptable

In addition to categories derived from sorting the litter situations shown on the prompt cards, the discussions also flagged the following situations where litter may be perceived to be a problem:

- Urban 'inter-zones' beyond town/city centres and residential areas – including back streets, main roads leading out of town, routes with high pedestrian footfall, mixed commercial/residential areas, car parks, 'corners' on private land that may attract wind-blown litter, and derelict sites
- Places that are associated with young people socialising, eating and drinking out of home
- Hyper-local problems – hotspots on particular streets or local sites that are thought to arise from particular behaviours or groups of people
- Places which attract litter but are not under local authority management

E. Perceptions of amounts of litter and what 'improvement' would look like

It proved difficult to establish what people perceive to be 'a lot' of litter and what would be recognised as 'an improvement'. In addition to what is seen there are multiple other influences which shape people's perception of any given situation.

The language of 'amount' does not appear to be at all engaging or meaningful. People struggle to describe what they see in terms of quantity or to differentiate between 'better' or 'worse' situations on the basis of amount on its own. While in their actual descriptions of litter in areas, people do seem to notice relative as well as absolute cleanliness, when prompted to discuss improvements in the abstract, people understandably frequently want to see everything cleaned. People do not appear to distinguish between what prevention, as opposed to clean up, may achieve.

Instead, responses to amounts of litter are heavily dependent on the context in which the litter is experienced and on the narrative people attach to why it arose, how long it will stay there, and what will happen next. In turn, these kinds of account underpin whether litter is felt to be a problem and the strength of negative feelings people have about it.

The situation is heavily clouded by people's knowledge and expectations about regular cleaning. Thus they may mix concerns about what *is* currently the biggest problem in a location, and what *would be* the biggest problem if it were not already being cleaned up.

- 'A lot' would be any more than a minimal amount in residential areas; and elsewhere any accumulation that was expected to stay there for any amount of time (which for many people could mean longer than overnight)
- Small amounts of hazardous or unpleasant items, especially in recreational locations used regularly, would also be considered 'a lot'. This includes beaches.

Concerns and priorities

The findings above show that people's perceptions of the priorities for tackling litter problems reflect much more than the amounts of litter they see around them on any abstract measure.

Participants formulated their thoughts on priorities very much within a narrow framework of their own, current, experience, which included an assumption that nothing significant about that situation would change (e.g. frequency of cleaning, littering trends and so on).

It was also clear the public have limited knowledge and understanding of the challenges facing amenity managers and policy makers in the litter arena - including maintenance of the status quo - so that they do not have a sound platform for generalising beyond their own experience or weighing up the value of different priorities for action.

The box shown below summarises insights on the 'events' and 'occasions' that people tend to find most upsetting, which underpin the way they identify priorities for action.

Litter is concerning when it is...

- On my doorstep
- Unexpected (for that place, time of day, or occasion)
- Hazardous or frightening
- A large item or accumulation in one place
- Expected to accumulate over time
- Hangs around (not cleaned up quickly)
- Spoils my enjoyment of my recreation and leisure time
- Deliberate – as opposed to accidental (small bits) or unavoidable (no bins)
- Harming my pride in the place where I live
- Having a negative impact on visitors, either tourists or family and friends

The discussions generated an overall impression that most participants think that all litter is a problem (even if it has low salience on a day-to-day basis) which should be cleaned up wherever and whenever it occurs. Clean up rather than prevention predominated in discussions, though this may also reflect the deliberate focus in this research on area cleanliness rather than littering behaviour as such.

Some participants rejected the idea that they could (or should) choose between different priorities.

The outcomes of the final card sort exercise (where participants were asked to categorise litter situations according to priorities for authorities to tackle) need to be seen in the light of the overall desire for no or minimal litter and the reassurance which is provided already by an impression that litter tends to be dealt with continuously and, for the large part, effectively. In the discussion groups, litter types and locations were presented as neutrally as possible, and with no prompts or information, other than that provided by the groups themselves. We suspect, though it was not tested in the groups, that how information is presented might significantly influence how issues and priorities are ranked – i.e. that at least some preferences are in fact quite weakly held.

Because participants have an expectation that litter will be cleaned up quickly it was often difficult to distinguish between what is *actually a priority* from what *would be a priority if it occurred*. Notably, any deterioration from the current situation, especially in residential areas, would be perceived as a significant problem.

From the litter situations that were presented to the participants (on the 26 sort cards) a set of broad themes were identified, running from highest to lowest priority:

- **Hazards** – dangerous and frightening items, even though they may not be seen frequently or at all
- **Large amounts and priority items** – while large amounts are not often seen they *would* be a high priority if they happened, including litter in residential areas and flytipping. Eating-related litter (including drink containers) is also associated with large amounts in city centres and identified as a priority
- **Intermediate, lesser evils** – these are ‘everyday’ litter items including cigarette butts, sweet and crisp wrappers, and chewing gum which people would like to see cleaned up but are conceded as a lower priority than the previous category
- **Small amounts, almost tolerable** – small amounts of mixed litter occurring anywhere also tended to be rated a lower priority though, ideally, people would prefer to see none, especially close to home
- **Not a priority - biodegradable** – comprising fruit debris, especially if dropped in greenspace areas; it should be noted that “biodegradability” does not necessarily make these items a lesser issue in reality

Figure 1 below shows all the litter situations that were included in the sort exercise according to these broad themes and an aggregated ranking score from the 23 sub-groups of participants that completed this task.

Card ranking based on frequency of selection as priority for authorities to deal with (sort 3) (Total of 23 sorts)

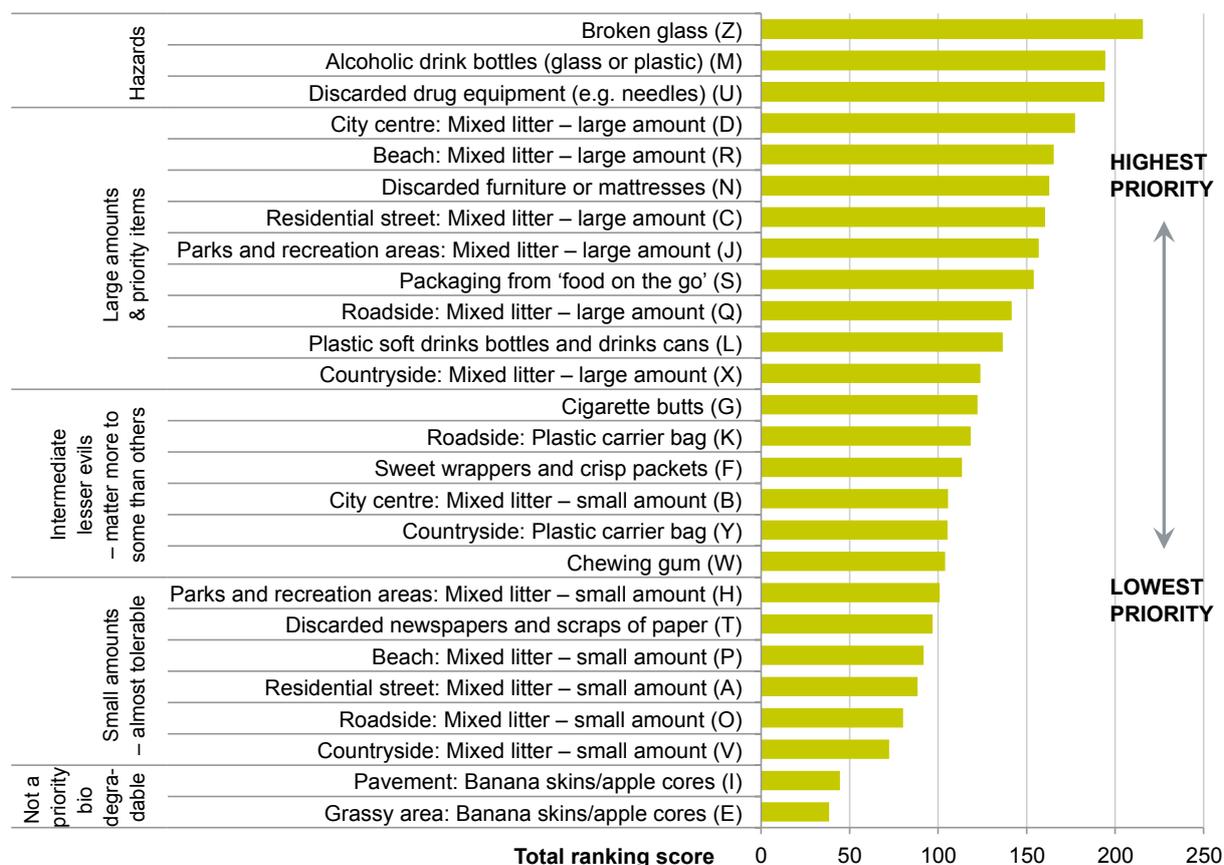


Figure 1 – Qualitative ranking of priorities for litter situations prompted in the discussion groups

Since this is a qualitative methodology, the ranking needs to be strongly caveated: it should be viewed only as a guide to the broad distribution of perceived priorities rather than a robust statistical measure of differences in priority between items.

Additional priorities that were not included in the sort exercise emerged from the discussions and post-task survey:

- Dog fouling
- More litter bins
- Tackling littering behaviours (including education and consideration of how fines might be used to greater effect)

Conclusions

On the basis of what participants reported in this research study, litter does not appear to be a major day-to-day concern for most people, largely because their general experience of the current situation is positive.

A common experience and expectation of regular cleaning underpins satisfaction about litter management. Prevention and cleansing are perhaps not distinct options in the mind of the public.

There are some people, however, who do experience real disamenity from locally specific litter problems who would like to see more done about those, including flytipping in residential areas, dog fouling and litter 'hot spots'.

Individuals – whether or not they experience litter problems directly – can have highly charged reactions to litter in different situations and the behaviours and people they assume are responsible. Imagined narratives around litter appear to be as important as the visual impact of litter itself in shaping perceptions of problems. Similar items may elicit very different reactions depending on how and why people think they have come to be littered.

When forming impressions of the priorities for tackling litter problems individuals are responding to far more than the actual amount or type of litter. Ratings of problems are highly dependent on context and narrative – including where people live, what they see around them, and where they sit on the spectrum of considering littering behaviour to be acceptable.

Problems that are ‘close to home’ – either literally or in places where people spend their leisure time – are particularly important to individuals, even if other situations are flagged as issues that need to be tackled (e.g. eating-related litter in town and city centres).

Drawing from all the research evidence, not only what participants directly suggested as priorities, it would be possible to suggest that attention around the following aspects could be most welcome, though also that people may be open to other prioritisation if they were presented with a clear rationale for it:

- The quality of pavements, parks, other recreation spaces and local walks in residential neighbourhoods (including the immediate countryside in rural areas and riverside walks in towns); tackling the causes of dog fouling and broken glass in these areas
 - Preventing flytipping in residential and nearby areas, including consideration of how bulky waste collections and household refuse services might be contributing to problem behaviours, and related education/communication that might be needed
 - Tackling everyday, continuous litter - the causes and impact of eating-related littering, not only from hot food but any litter arising from food/drink on the go, from both pedestrians and drivers. Related issues would be:
 - Litter arising from city centre night-time economies, including behaviours as well as cleansing
 - Litter originating from vehicles (especially food and drink containers and leftovers from eating on the go), tackling behaviours that lead to dumping in car parks, lay-bys and out of car windows while driving; bringing nuisance and hazards of this kind of littering to people’s attention
 - Exploring how to tackle specific locations in the public realm outside local authority control where litter accumulates (e.g. hospitals or other public buildings, orphan and derelict sites, private land where ‘corners’ accumulate wind-blown or passing litter)
 - Dealing with hazardous items, both prevention as well as cleansing, especially in areas used for recreation (beaches, parks and other local recreational areas)
 - Enabling residents to identify and report local and hyper-local priorities
-

1 Background, aims and method

This section describes the study context, aims, approach and methods.

1.1 Context for the research

Zero Waste Scotland is conducting a programme of research to support the development and implementation of the Scottish Government's national litter strategy, which will provide the policy framework for action to deal with Scotland's litter. The 2013 report, Scotland's Litter Problem, indicated that 250 million easily visible items are incorrectly disposed of each year as litter and around 80% of this material is potentially recyclable. As such, tackling litter is an essential part of creating a zero waste society. Litter also contributes to poor environmental quality which tends to be experienced disproportionately by those living in the most deprived neighbourhoods.

The existing research by Zero Waste Scotland has looked at who litters and why, as well as measurement of the extent and nature of littering (and flytipping) and the direct and indirect costs associated with dealing with the problem. Further information on local environmental quality is provided by LEAMs surveys undertaken by Scottish local authorities, coordinated by Keep Scotland Beautiful (KSB).

This latest research study was commissioned to generate a better understanding of how litter is *experienced* by the public - how they perceive litter, how they feel about it, and what matters most to them (in terms of types, locations and amounts; and what a 'noticeable improvement' would amount to). Alongside findings from the wider research programme, this study will help the Scottish Government and Zero Waste Scotland to clarify priorities for action, inform communications and engagement with the public around litter, and provide a platform for future research to measure changes in perceptions over time.

1.2 Aims and scope of the research

In this study litter was understood to be "waste in the wrong place", in line with the definitions used in previous Zero Waste Scotland research. This does not include litter that is correctly disposed of in litter bins. Apart from prompts for individual small items or items dumped alongside bins in communal areas, flytipping was only included in the discussions when it was introduced by research participants. Furniture and mattresses were included in the pre-task survey but not described as flytipping.

The primary focus of the research was on how litter is experienced and how it impacts on individuals' sense of well-being rather than who litters and why. However it was acknowledged from the outset, and reinforced in the discussion groups themselves, that the two aspects are not always separate: in particular, research participants' tolerance towards litter is likely to be influenced by what they see around them and what they think about the people they believe are responsible for littering. A central objective of the research was to identify and prioritise which aspects of the litter problem matter most to the public.

Specifically, the research set out to address:

- Types of litter – to identify which items are perceived to be of most concern
 - Locations – to identify where the impact of litter is felt to be most negative
 - Amounts – to identify what is understood by terms such as "heavily littered" and what would be perceived as "an improvement"
 - Overall – to provide insight into what the public thinks should be the priorities for prevention and clear-up efforts
-

In order to capture the full breadth of perceptions about litter in Scotland, Zero Waste Scotland also wished to explore the experiences of different socio-demographic groups and this was incorporated into the research design.

1.3 Approach and method

It was agreed that qualitative research would be the most productive way to explore these issues and generate the breadth and depth of insight required. Recognising that litter can often be an emotive topic, a qualitative approach would enable the research to disentangle perceptions of the actual amounts and types of litter from other attitudinal factors which influence people's first responses.

1.3.1 Components of the research

The chosen approach was to hold 12 discussion groups, aiming for 10 participants in each, in six different locations across Scotland, supported by short pre-task and post-task surveys completed by group attendees. In addition, participants took photos of their local area during the pre-task so that discussions in the groups would be grounded in real, and recent, experience. The photos were also used as stimulus material in the groups. A pilot group was held to test the effectiveness of the topic guide and stimulus material and small changes made in response.

The methodology is described in more detail in Annex 7.1 while the figure below summarises the different components and how many participants took part in each.

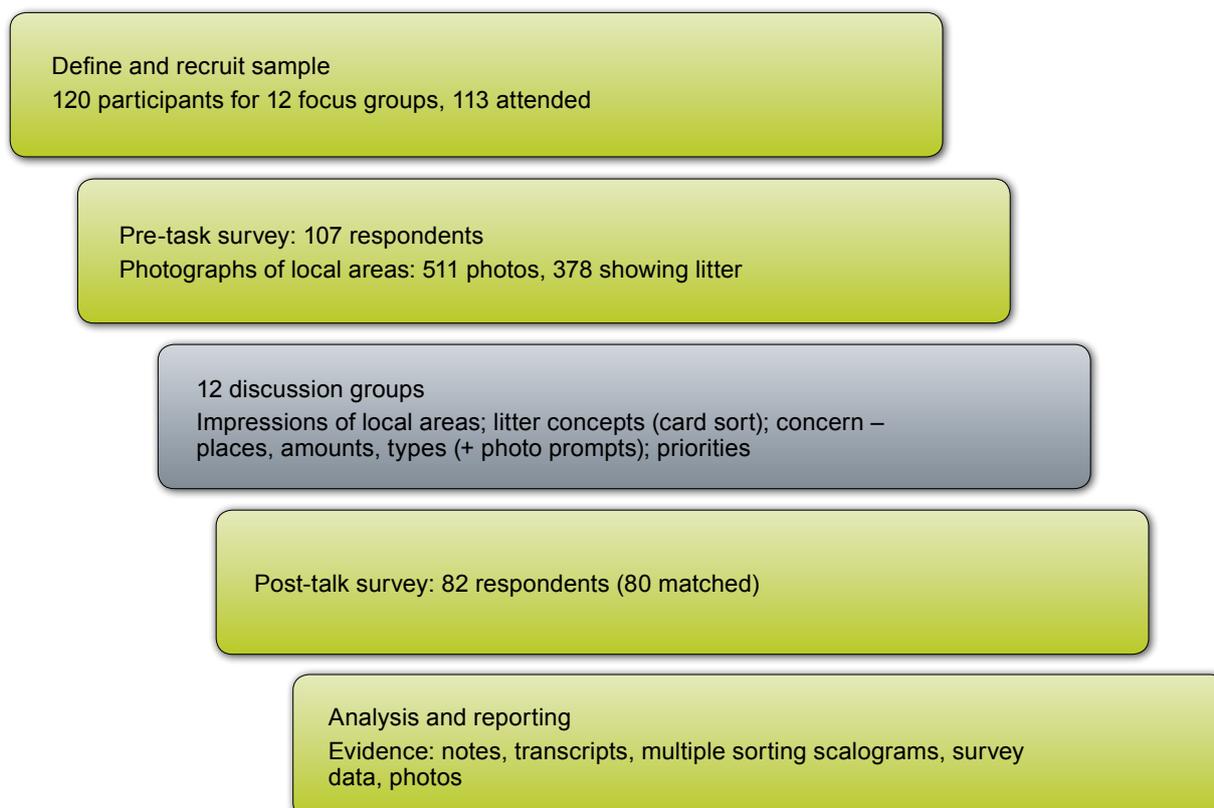


Figure 2 – Summary of the methodology

1.3.2 Participant selection and characteristics

A sample profile was devised by Brook Lyndhurst and agreed by Zero Waste Scotland. It was designed to provide a balanced spread of participants across the following characteristics:

- Types of area – urban, mixed and rural; coastal and inland; local authorities with above, below and average LEAMs scores
- Regions of Scotland – lowland, central, highland; east and west
- Socio-demographic characteristics – gender, age, social class
- Litter-relevant behaviours – drivers, smokers, train users, and people who visit different locations (urban centres, parks, scenic areas and beaches)

Two groups were conducted in each of Aberdeen, Ayr, Dumfries, Glasgow, Perth and Stirling. More information on the composition of the groups can be found in Annexes 7.1. and 7.2 (including group identifiers for quotations used in the report). These locations were chosen to represent a spread of opinion across Scotland, as listed above, not to elicit comments about the specific towns or areas concerned, and indeed some of those attending the groups came from slightly further afield.

1.3.3 Techniques used in the discussion groups

In addition to standard qualitative research approaches, including the use of engaging stimulus materials, the groups included a card sort exercise (called the Multiple Sorting Procedure or MSP).

The multiple sorting procedure is a qualitative methodology rooted in psychology which enables researchers to gain a deep understanding of how participants relate to the topic in question (litter) and the associations they make between different aspects of it. In this case, sub-groups of participants in each discussion group sorted 26 cards which described a range of litter situations (places, amounts, and types – see Annex 7.5). Further explanation of the procedure, and the nature of the outputs from it, is provided alongside the results in section 4 and in Annex 7.1.

1.3.4 Limitations of Qualitative Research

Qualitative research is designed to provide depth of insight on why and how people think and behave as they do, and to indicate whether those attitudes or behaviours are widely held or rare. In this case, qualitative research was preferred to a statistically representative survey because of its ability to get below the surface of first responses and to unpack the complex bundles of factors that shape public perceptions of litter problems.

Against those benefits, the normal limitations of qualitative research apply and need to be borne in mind when interpreting the findings. Most importantly, while the research provides robust insights and understanding that can be used as a platform for developing policy and communications (alongside other evidence), *it cannot measure the extent to which the perceptions identified in the research are held across Scotland as a whole*. A statistically representative sample of the population would be needed to test and quantify the insights in that way. In that context, it is important to read data from the pre- and post-task surveys as representing only what participants in this study reported: results should not be generalised to the whole Scottish population.

In reading the findings, it is also worth bearing in mind that the pre-task had a priming effect by drawing attention to some sorts of litter that are probably less front of mind in reality. This effect was most noticeable with respect to drug-related litter. This limitation needs to be set against the broader benefit of the pre-task, which did its job of focusing participants' minds on actual experience rather than hypothetical concerns: this was especially useful in discussions of concerns and priorities where the sentiment 'it would be concerning but I don't really see it' was common.

1.4 Presentation of the findings

The report provides a narrative account of key themes that were developed from the evidence, bringing together where relevant evidence from different parts of the research: from the pre- and post-tasks, the group discussions and the sort exercises. Findings from each exercise are woven into the narrative rather than being reported individually.

The report begins with contextual information about participants' attitudes towards litter which will help readers to make sense of the discussions about places and types in section 3. The following section (4) then focuses on how participants categorise given litter situations and characterise amounts of litter. Section 5 considers participants' reported priorities for action to tackle litter, set in the context of the analysis in preceding sections of the report about the underlying influences on how litter problems are conceptualised. Conclusions are drawn together in section 6.

2 Litter attitudes, language and everyday experience

This section describes the base of attitudes, experience and emotions that participants are drawing from when they talk about their perceptions of litter and how they react to it.

2.1 General views on local areas

The groups began with an open discussion of what people like or dislike about their area and how they rate the quality of the environment there. This provides broader context for understanding how they perceive litter and how those perceptions are formed.

Participants most often said they like the places where they live, with a few complaints from a small number who reported they live in slightly run-down areas, or in city centres. Aspects that were frequently said to contribute to a nice place to live were: peace and quiet; friendly and well-behaved neighbours; local access to parks and places to walk; clean play spaces for children; and access to shops and town centres. Those from more urban areas were more likely to mention busyness and access to city services as something they value – and were perhaps more tolerant of other people, noise and dirt.

Leading dislikes that were mentioned without prompting, related to potholes in the roads or cracked pavements and dog fouling. The salience of these issues to participants is supported by the prompted pre-task survey results where dog fouling and the state of pavements were rated as fairly or very important to quality of life by almost all the participants, slightly behind crime. Those features also registered the biggest gap between importance and satisfaction in the survey, on the basis of average scores (Figure 1). It is to be expected that reported levels of absolute concern were high because of the prompted nature of the survey question, but differences between the aspects covered are nonetheless informative of participants' relative concerns. In particular, the responses help to put litter concerns into context against other aspects of local environmental quality. It is worth noting that the

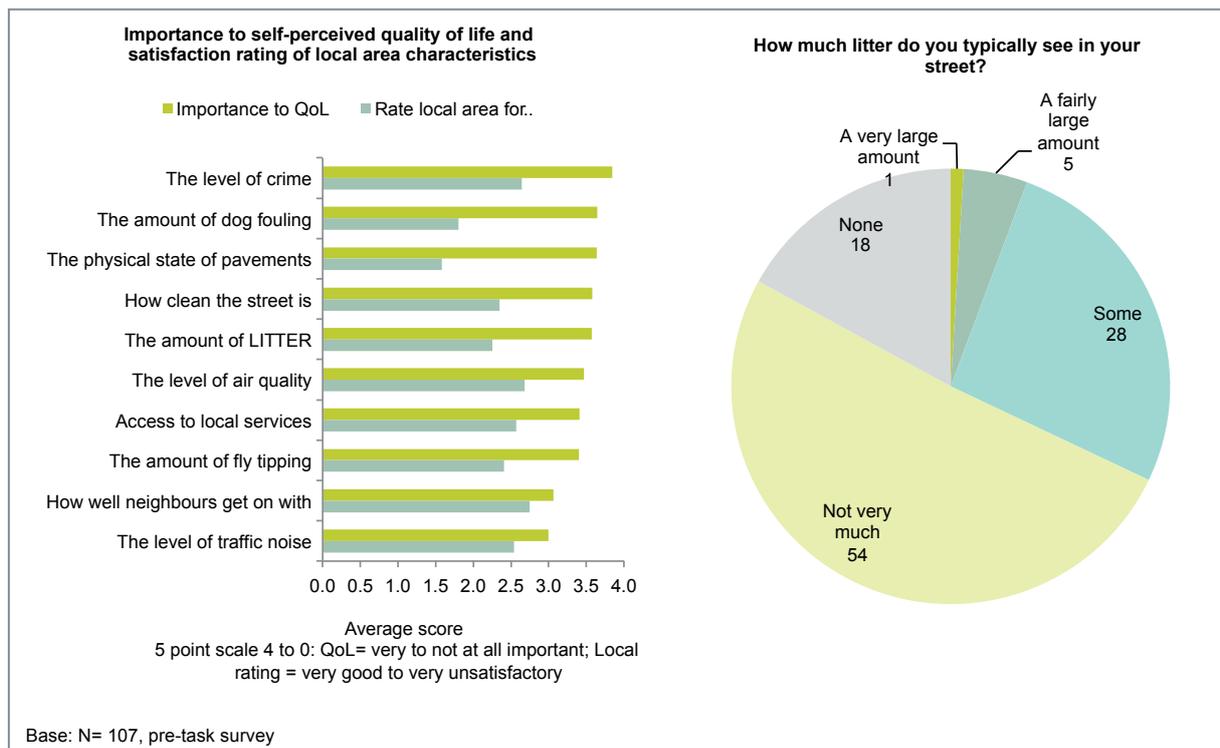


Figure 3 – Participant attitudes to the quality of their local area

public may not solely think about litter in relation to this explicit category – perceptions of how clean the area is are likely to be informed by litter (as well as some other factors such as graffiti) whilst the perceived “state of the pavements” might also be influenced by factors such as litter.

In discussion, some participants also mentioned poor general maintenance of their estate or area as an issue. A small number had specific problems with broken glass near their home. A few were annoyed about mess arising from domestic rubbish bins and collections or the poor state of communal bin areas. Some cited ‘problem’ people in their area or anti-social, noisy, neighbours (noise in the city groups especially). Flytipping was also mentioned a couple of times in this opening discussion (see section 3.3 for more on flytipping).

Cleanliness of the streets and litter followed behind dog fouling and the state of the pavements/streets, in terms of participants’ average rating of importance to quality of life. Most participants (87/107) rated the amount of litter “where you live” as acceptable, good or very good with only a minority saying poor (13) or unacceptable (7). This was reflected in that very few participants reported that they see much litter on their street (6/107 in the survey). The most common experience of participants in the groups was to see not very much litter (or none) where they live although litter, dog fouling and general unkemptness of the immediate local environment causes disamenity for a small number of participants. This is important background for the views that participants expressed later on about the acceptability of litter and amounts.

2.2 General experience of litter

2.2.1 *Seeing litter*

Participants generally reported they felt their areas were clean – although a few people sometimes disagreed, citing specific problems of litter or illegal dumping. This positive impression often encompassed town centres as well as residential areas (except some urban residents living near their city centre). There was widespread positive mention of the amount of effort that councils go to in order to keep places clean, often appreciatively about cleaners being out early in the morning to clear up litter before anyone is out and about to notice it. Some participants were of the opinion that places they visit are cleaner than they used to be as a result of the effort put into cleaning, including beaches.

A few participants were glad that litter is cleaned up speedily but also suggested that effective cleaning helps to perpetuate the problem by making it less immediately annoying to the law-abiding public, and provides a justification for those who drop litter. Some participants felt that effective cleansing should be expected as a matter of course because they are paying for it through council tax. This aspect was mentioned in passing several times but was not probed in depth to establish whether it was a majority or minority view.

The overall impression from the group discussions was that most participants do not pay much attention to litter on a daily basis – even though they might become quite animated and emotional when asked to consider the topic directly or are shown photo prompts.

Not everyone had the same experience but many participants said they had seen more litter after they were asked to look around to take photographs. Some were surprised by what they saw. Comments were made to the effect that they ‘tune out’ or become ‘immune’ to everyday litter in the places they normally pass through. Others remarked that whether or not you see litter often depends on the time of day, with several reporting they had seen lots in certain places at one time of day which was not there when they looked again.

It became clear that this impression of rapid response leads to an expectation that litter will only be a temporary problem and therefore not really something to worry about. There are some places where this does not hold, as described in section 3.

This general impression from the groups was reflected in the pre-task survey results, which asked participants to say how much litter they typically see in a range of different places (Figure 4). For everywhere except derelict or unused sites in cities, participants were more likely to say some, not very much or none rather than a fairly or very large amount. As noted above, litter was least likely to be seen in residential areas as well as scenic locations; and most likely to be seen in quantity in city centres and in roadside lay-bys. If the 'some' category is included, then parks, roadsides and waterways were the next most likely places where participants reported they see litter.

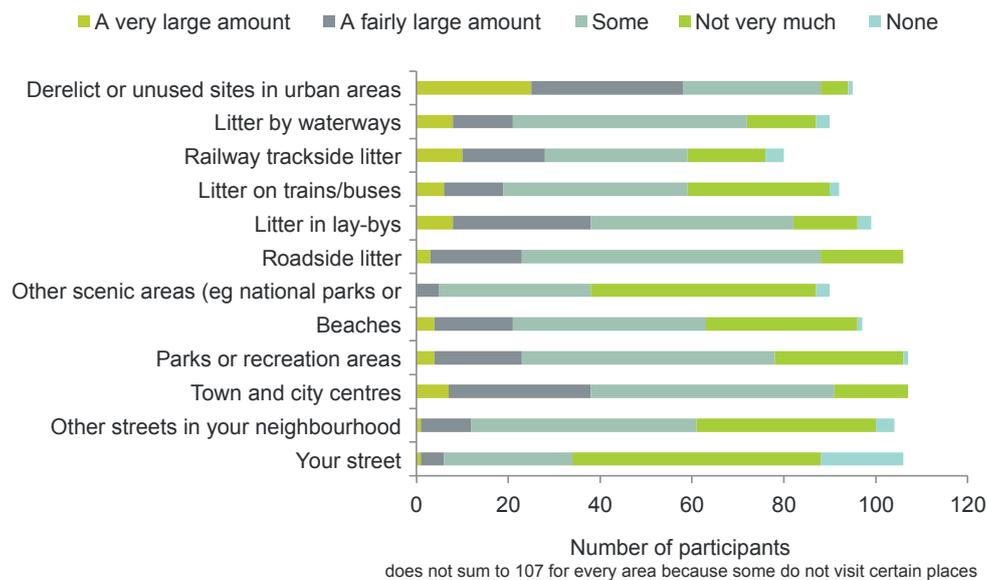
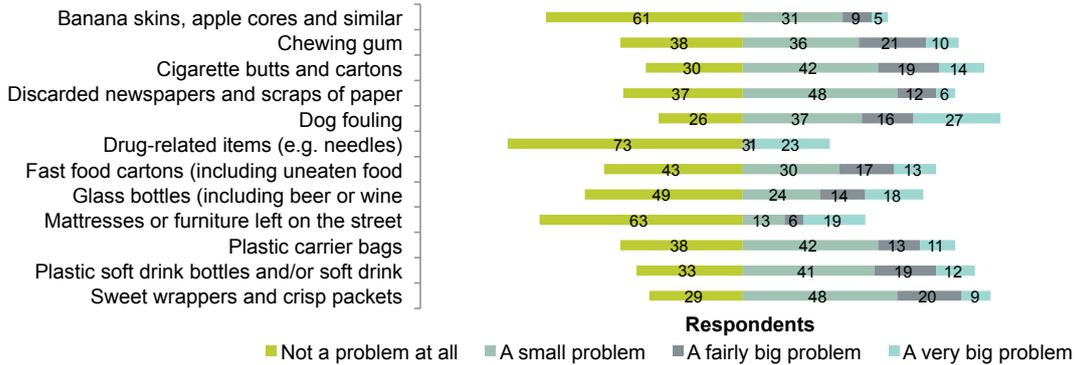


Figure 4 – How much litter participants see in different places when they are out and about

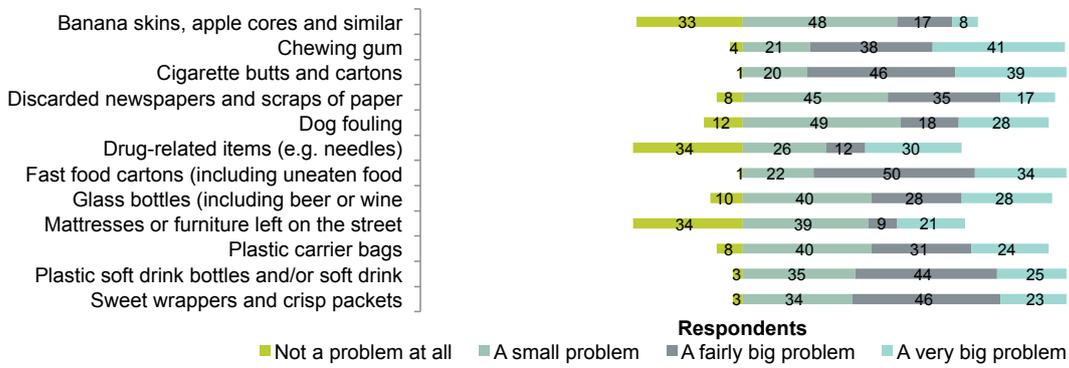
2.2.2 Initial perceptions of litter problems

Participants' baseline perceptions of how much a problem they consider different types of litter to be in different places were captured in the pre-task survey. The results provide an initial context for the views and conversations about litter problems that developed in the groups, where there was nuance and subtlety, which is described in more detail in sections 3 and 4. The following perceptions (Figure 5) also need to be seen in the context of how much litter participants reported they typically see in different places, as described above.

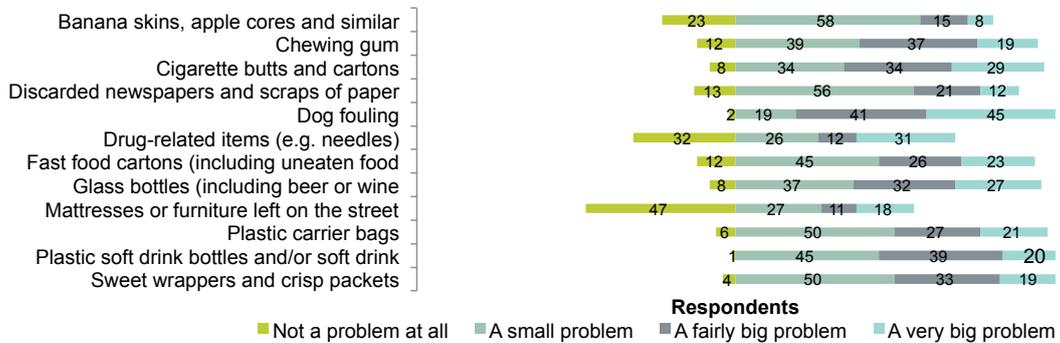
Please consider the items you typically see ON YOUR STREET. How do you feel about the following on your street?



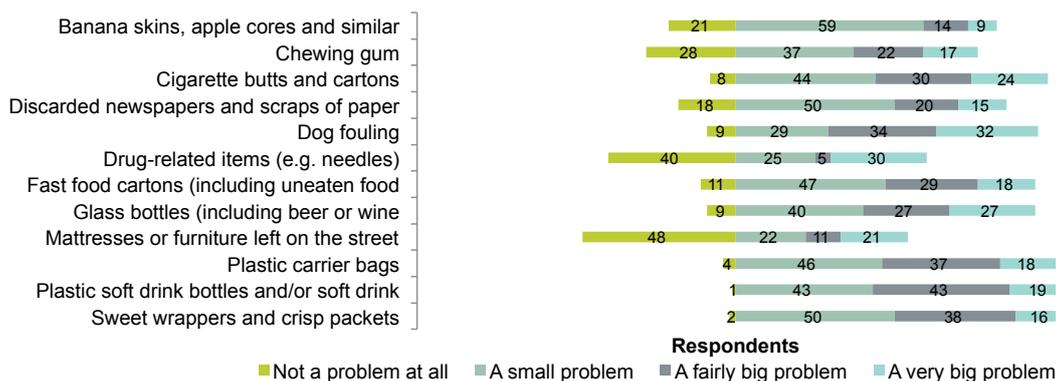
Please consider the items you typically see in town and city centres. In TOWN AND CITY CENTRES how do you feel about the following?



Please consider the items you typically see in (urban) parks and recreation areas. In PARKS AND RECREATION AREAS how do you feel about the following?



Please consider the items you typically see in SCENIC AREAS, COUNTRYSIDE and BEACHES. In these kinds of places, how do you feel about the following?



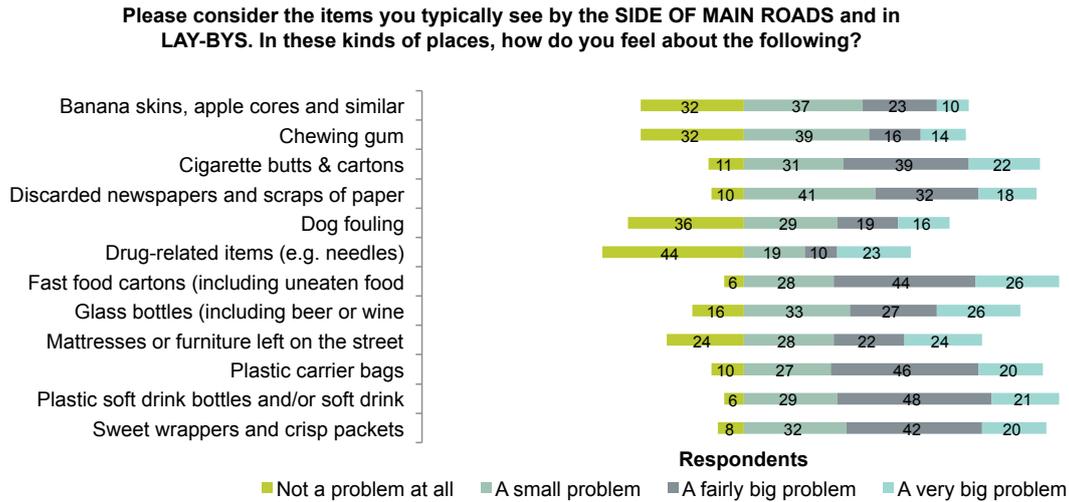


Figure 5 – Perceptions of how much of a problem litter is in different places (107 respondents, pre-task survey)

2.3 Attitudes to litter and littering – before the groups

2.3.1 Participant definitions of litter

As further context for understanding what litter problems matter most to participants, the research explored what people include in their personal definitions of litter. Previous research has shown that some items (e.g. cigarette butts) do not ‘count’ as litter for some litterers.

The one item that stood out in both the discussions and the pre-task survey as less likely to be seen as litter was fruit cores and skins. Those who held this belief reasoned that it is harmless because the items are bio-degradable and therefore neither a nuisance nor long-lasting.

At the other end of the spectrum, fast food cartons (including leftover food) and sweet or crisp wrappers were always considered to be litter. Apart from that, a small minority in the survey said ‘maybe’ or ‘not litter’ for all other items. This was true of very few people for other food related litter and plastic carrier bags, rising in order through cigarette butts, then chewing gum, mattresses/ furniture on the street and drug-related equipment, to dog fouling and then fruit debris (Figure 6).

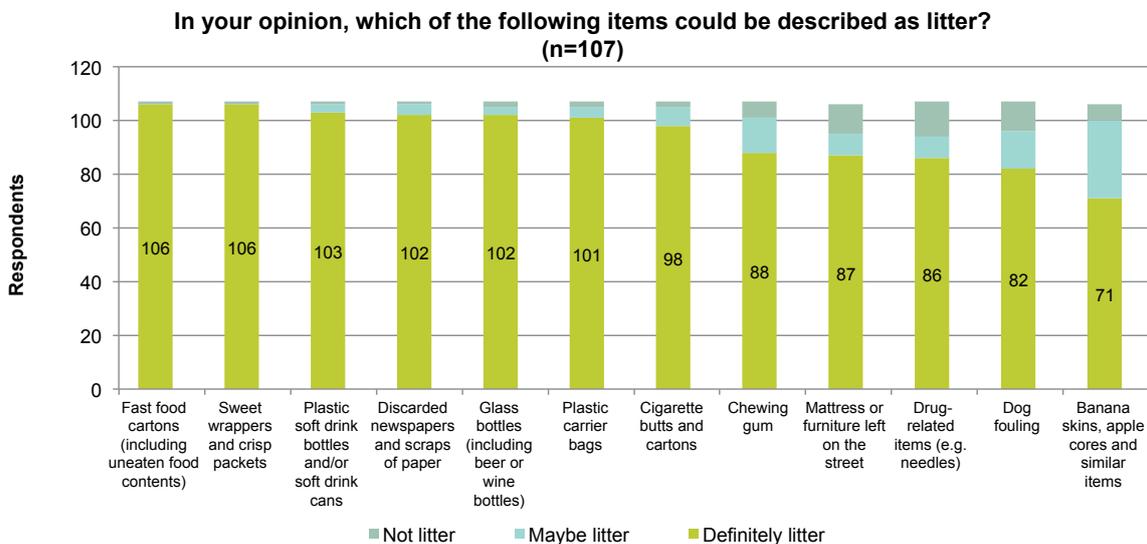


Figure 6 – What participants consider to be litter (107 respondents, pre-task survey)

2.3.2 Attitudes to littering

Littering behaviour was not probed explicitly in the groups as this was not the focus of the research and stood the risk of alienating some participants. Nonetheless, the group discussions confirmed previous evidence that showed how reluctant people are to admit to littering because of embarrassment and social pressures. Few participants openly admitted to littering during the discussions except in one group of younger, urban participants who seemed comfortable in being open about their behaviour. It happened occasionally elsewhere - if one person took the lead then a few others might hint that they litter (for example, during the sort exercises where the moderator was minimally involved, which may have encouraged greater freedom of expression and less pressure to conform to an expected response).

The pre-task survey revealed a more nuanced picture for this particular set of participants, showing more littering behaviour than was suggested in the group discussions. In fact, most participants reported they have littered to some extent (Figure 5).

- Only 1 in 3 selected the response “I’ve never dropped litter”
- The majority (67/107 participants) indicated they ‘may have’ or sometimes drop ‘small bits and pieces’
- Only a small number (9/107 respondents) said without qualification that they litter

The further attitudinal question (Figure 7) confirmed that many participants feel that littering is accidental or unavoidable, including a justification that there are not enough bins or that they are full, or it just can’t be helped in some situations. Again, this confirms the findings of previous research on littering behaviours. It became clear across the groups that whether litter is considered to be accidental or opportunistic, as opposed to deliberate, was a key dividing line for participants in deciding whether they think it is acceptable or tolerable. There was a sense that people may be less offended by litter in situations where they could imagine they might drop litter themselves and more offended where the blame could be directed at others. The narratives that people use to rationalise littering behaviours – ‘I only do it a bit’ or ‘it’s not really my fault if I do’ - are a key challenge for communications around litter prevention.

And to be honest it’s more relatable. I know it sounds bad but you can’t help but think we all - unless you’re really, really conscious of this - we’re all going to be doing this one way or another. I could imagine myself maybe wandering home drunk, fast food wrappers or plastic bottles OK, but I would never break a glass in public and I’d probably never do any of these either.

Man, Urban 2

Q: OK so that was quite honest. What kind of litter do you admit that you drop?

W: I don’t know. I just don’t think about it and I need to stop it, but I don’t know: not massive things! Like, I’d feel bad if I dropped a crisp packet or something, but just like sweets and stuff I just drop them.

Dialogue, Urban 3

For some people – most likely those who never drop litter it would appear – littering behaviour is always unacceptable and inexcusable. These participants often expressed strong judgements about those who do drop litter; and about personal responsibility and respect for one’s neighbours and neighbourhood. This sentiment underpinned the many comments made about residential areas, where it was often stated that residents should uphold a sense of personal responsibility for keeping them clean, either by not dropping litter or lifting odd bits when they see it and keeping their gardens tidy (see more in section 3). The following quotation conveys some sense of the emotions involved here, notably about ‘ownership’ of litter problems and feeling unfairly judged.

Where I live it is actually quite pretty, someone had dropped a sandwich packet and it ended up next to my car and my next door neighbour put it under my windscreen wiper and I said this is not mine but I will make a point by putting it in the bin. You cheeky so and so, but I made the point.

Woman, Mixed 3

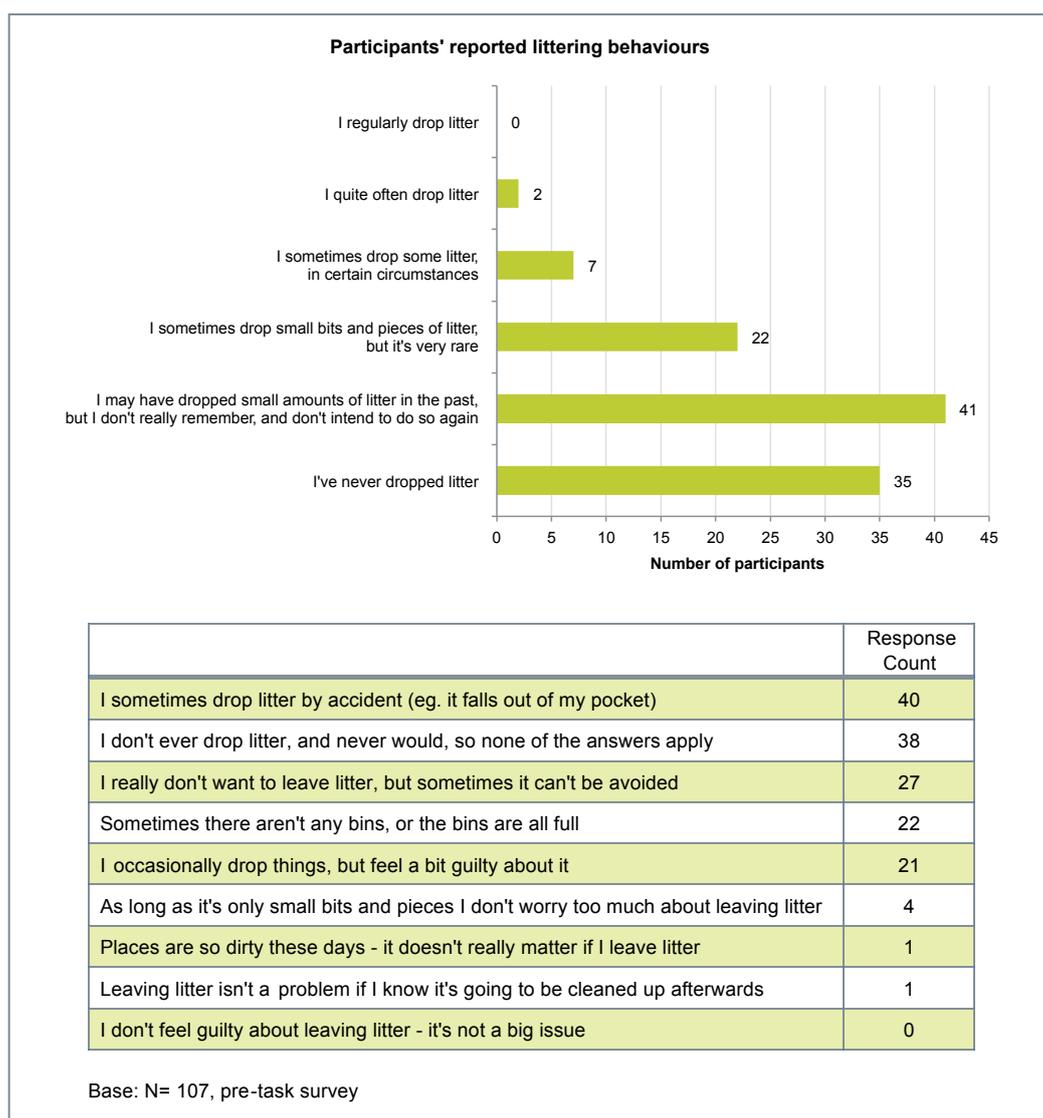


Figure 7 – Reported littering behaviours and attitudes

The often reported gap between claimed and actual littering behaviour – seen again in this research – is an important factor to take into account when developing litter policies and interventions. In particular, the sensitivities around acknowledging littering behaviour (even to oneself) create challenges for those designing approaches to engage the public. It is highly probable that people will want to blame others first and themselves last. A risk of alienating people before they have begun to engage, because they feel unfairly singled-out or less blame-worthy than others, needs to be borne in mind.

2.4 Language commonly used

For similar reasons, it is important to hear how the public talk about litter as this provides insight into how they might respond to explanations of policy or calls to action, whether communications are targeted to particular audiences or more broadly. If the language used to inform or persuade does not feel right to the intended audience at an emotional level then it risks bouncing off them altogether.

The range of language used by participants to describe how they experience and react to litter reflected the range of attitudes described above. During the discussions and sort exercises the terms 'normal', 'standard' and 'to be expected' were often heard. Feelings were expressed about the visual

impact of litter, personal emotions, and what they thought about the perpetrators (see the “judgemental” category below), as illustrated by a selection of terms shown in the call outs below.



There was also an impression that participants used stronger or more emotive language when they were prompted directly by pictures of litter, both their own photos and the ones used as prompts. Some conceded that they never or rarely saw problems like the ones depicted, particularly where large quantities of litter were shown – but they still found some of the scenes upsetting.

Invariably, and without any prompting, participants volunteered narratives about why that specific situation might have occurred, which could stir up strong feelings about the motivations or morals of the people who were deemed responsible, and what was going to happen next. The narrative was very often part and parcel of the way they perceived the litter situation being discussed, influencing whether they considered it a lot or a little, acceptable or ‘out of order’.

When participants referred to litter in purely descriptive terms, ‘litter’ was in fact the most widely used term: ‘waste’ did not feature in the vocabulary around litter. Participants sometimes also used ‘mess’ or ‘rubbish’ and a whole range of terms were used to describe eating-related litter – for fast food this was variously ‘wrappers’, ‘packets’, ‘bags’, ‘cartons’ or ‘containers’.

2.5 Change in attitudes following the groups

Participants were asked to complete a short survey online in the week after the groups took place. This exercise aimed to identify whether the participants' experience of considering litter in more depth than they ordinarily do or hearing about others' perspectives caused their views to shift. Of the 113 participants who took part in the groups, 80 submitted responses to the post-task survey. The pre and post-task responses of this sub-group were compared. Topline results of the post-task survey can be found in Annex 7.3.

Overall, shifts in the response to most questions were small or negligible and did not change the overall picture outlined above. Shifts in individual responses tended to be to the next nearest answer category, typically in the direction of being more moderate than in the pre-task. Key points of note were:

- Taking part in the groups appears to have raised awareness of litter and litter problems
- A sizeable minority reported they now think there is more litter than they originally expected (Figure 8) (from the group discussions this appeared to apply more to places that participants regularly visited or passed through beyond their own street or immediate neighbourhood)
- Slightly more people admit they drop litter but this did not change the overall pattern of reported behaviours
- Views about the quality of local areas tended to be slightly more positive, including the amount of litter; dog fouling was the exception where there was little change.

Q: After attending the group (and completing the tasks), what is your view on the amount of litter that there is in the places where you go?

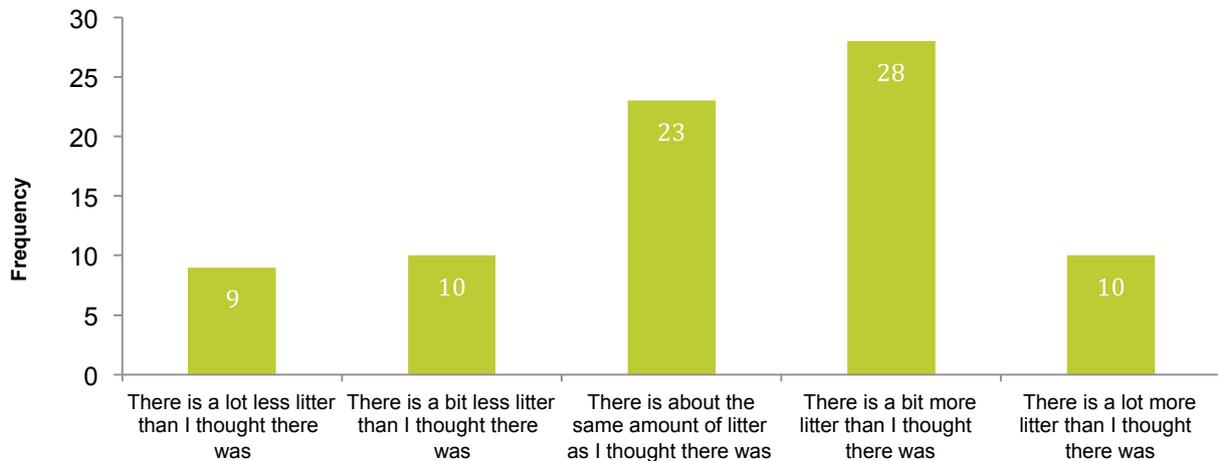


Figure 8 – Perceptions of litter amounts in the post-task survey (80 respondents, post-task survey)

3 Places and types – overviews of experience and reactions

This section provides an overview of findings for each place and type of litter covered in the research, drawing together different sources of evidence from the surveys, sort exercises and discussions. This provides a platform for considering concerns and priorities in sections 4 and 5.

3.1 Places

3.1.1 Residential areas

Summary

- Most do not see it as a problem - streets are largely kept clean
- But low tolerance to any litter seen
- More tolerance near town/city centres
- Residents expected to play their part – tidy gardens, picking 'small bits'

Participants came from diverse residential areas, from rural villages, to market towns, to urban estates and city streets. Local streets were generally described as 'clean' or 'acceptable', though dog fouling was a significant irritation for many (and rated most problematic in the pre-task survey question about residential areas). Almost everyone found the idea of litter in their own street unacceptable, though a small amount might be expected and tolerated in urban residential areas, especially where there are flats, even if people dislike it. Participants made an association between 'cared-for' areas and low levels of litter and vice versa, bearing out the 'broken windows' hypothesis. Cared-for areas were often identified with older residents. Badly maintained gardens or shared grounds, and leaving household items in them, were cited as evidence of neglect and likely to become litter magnets.

Participants sometimes said they were annoyed when litter found its way into their gardens, most usually from passing pedestrians – typically cans, crisp packets, sweet wrappers and other small wind-blown debris (e.g. carrier bags). A small number reported that communal bins can attract litter and flytipping, and seagulls, if not well managed. Some experienced take-away containers being thrown into gardens by people eating on the move. Some also complained about wind-blown debris left behind after domestic bin collections, or as a result of wheeled bins over-flowing, being tipped over or vandalised.

Emotionally charged, and sometimes quite judgemental, views were widely expressed about litter in residential areas being the responsibility of the people who live there, alongside views that people who cause litter, or who live in littered areas, have no respect for themselves, their neighbours or society. Frequent mentions were made of lifting small amounts of litter outside their own properties and an expectation that people should "take pride in where you stay". Even the few who openly said they littered also agreed it was not acceptable behaviour in residential areas or parks.

3.1.2 Town and city centres

Summary

- Where litter is seen most – but also where people may be most immune to noticing it
- Often stated worst at night, associated with drinking & late night eating
- Food related, cigarette butts & gum
- Experience and expectation of rapid cleaning which removes concern
- Lack of bins/distance to bins from where litter arises sometimes mentioned

There was general consensus that this is where litter is most likely to occur and there is usually more than in residential areas. Participants indicated that some level of litter is to be expected and, for some

people, 'small bits' in these locations may not actually count as litter (including those who admit to littering). Participants in some groups said they had become 'immune' to seeing litter in urban centres as compared to the countryside where it really stands out.

Small amounts of litter in towns and cities were felt to be acceptable because there is a general expectation – backed up by experience – that any litter seen will be cleared up quickly. Based on what participants said, it is highly likely that perceptions about what is tolerable would change if they did not have this assurance of regular cleaning. There was no consensus on how much is 'a lot' in these types of place, though having to step over it was mentioned as a threshold a couple of times. Levels of tolerance appeared to vary, related to participants' usual experience.

The three items most commonly associated with urban centres were chewing gum, cigarette butts and eating-related litter, notably fast-food packaging. On the whole, participants seemed to find chewing gum less annoying than the other two types, perhaps - thought some participants - because you stop noticing it over time even though it tends to be ubiquitous. Fast food litter was often said to be aggravating, especially when participants associated it with seagulls and attendant nuisances – litter being strewn around and gull droppings on cars, buildings etc. (see further detail in the section on food on the go). Problems related to seagulls in town centres were mentioned in several groups, not only coastal locations.

I probably see a lot of people dropping food and stuff in city centres because it's kind of annoying if you're walking about especially in Glasgow I've noticed it a lot, if you're walking by and there's two seagulls dining on somebody's kebab from last night. They look fierce and they're flying down near your head and stuff and it just annoys me.

Man, Mixed 1

The experience of litter in urban centres depends to some extent on when people are out and about. Some participants reported that litter is much worse at night, concentrated where people have been drinking - around pubs, clubs and nearby take-away food outlets. This was of particular concern in the two most urban groups but 'Sunday morning' litter from Saturday nights also came up in other groups. Only those going to these areas at these times will experience this. Cigarette butts, food waste and food containers were most commonly mentioned but silt on the pavement was also flagged as a problem in two groups, highlighting the fact "litter" is not necessarily seen as distinct from some other issues of anti-social behaviour by the public. Some participants also dislike seeing bagged waste left outside shops or restaurants at night because it has the potential to become litter if the bags become split open for any reason. Rats were also mentioned in this context. When talking about this aspect, as well as food-related litter, there was some sense that an expectation of "yuckiness" is a factor in participants' perceptions of what they dislike most in urban centres.

There was widespread recognition and satisfaction that litter in town and city centres will usually be cleaned away rapidly, including overnight/early morning cleaning at the weekends. Equally, over-full bins were sometimes blamed for causing litter problems in urban areas, especially where seagulls could access the contents.

Some participants also noted that cleanliness varied between different areas of towns and city centres: while main shopping areas are well maintained other areas may be more neglected and littered, such as redevelopment areas and near building sites. In one location, participants felt their town centre had suffered from an out-of-town exodus of shops which had led to general shabbiness of the town centre. They felt this could make litter more apparent and run the risk of an increase in littering behaviour because the place already looks untidy. A similar theme was mentioned in a different group in relation to (reportedly) badly maintained public green spaces.

I must admit you do see a lot more [cleansing staff], the road sweepers in the town centre and especially of night time when the shopping has kind of finished, they're all in the van picking up litter. They can't get everything can they but they do try but it's certainly a lot better.

Man, Rural 2

3.1.3 Parks and recreation areas

Summary

- Parks & places for 'everyday' walks are part of a 'nice place to live'
- Litter spoils enjoyment of leisure
- Concern about hazards – dog fouling, broken glass
- Lack of/full bins often blamed

Local access to parks, off-road footpaths and urban greenspace was a frequently mentioned attribute of a nice place to live. Participants said they find it upsetting to see litter in those places because they have gone there for relaxation and a 'nice' experience, including many who regularly walk their dog or go out for exercise. Litter is said to be unsightly which undermines the pleasure of being outdoors. Similar feelings were expressed about other places where people go for a stroll but are not necessarily the countryside proper: paths by small rivers or burns in local neighbourhoods, local cycle or bridle paths, or local wooded areas. Over a third of the photos showing litter that were submitted by participants were taken in parks, more than any other type of location.

Dog fouling was mentioned a great deal and is something that participants were very animated about, quite often related to perceived health risks to children as well as the irritation of stepping in some. It ranked as the most problematic 'litter' in parks in the pre-task survey. In discussion, participants were much more animated about dog mess than litter in parks. Participants do not seem to see any distinction between the issues of littering and dog fouling.

Another hot topic for some participants – and reportedly for similar reasons of hazard to both children and dogs – was broken glass, in parks and on paths. Teenagers drinking in parks at night were largely blamed for this apparent problem, with some people conveying a sense that their upset extends beyond the actual litter to the people who are doing it, involving strong disapproval of their behaviour and attitudes. A few commented similarly about people who have picnics in parks but don't clean up afterwards, as distinct from what 'we' would do. It is unclear if the social groups identified as being to blame by participants are in fact implicated. As already mentioned, there is an overwhelming tendency for people to assign a narrative to how littered waste has arisen, irrespective of whether they have seen the incident in question or not.

Flytipping was also mentioned by some as a feature that spoils their enjoyment of local walks and can be a danger, especially to dogs. Several mentions were made of small rivers with fly-tipped items such as supermarket trolleys, traffic cones or simply accumulations of broken glass or dumped rubbish bags.

While the pre-task survey indicated that all other kinds of litter are considered to be at least a moderate problem in parks and recreation areas, this was less strongly endorsed by the group discussions. Instead, several conversations focused on bins - the frequency and timeliness of them being emptied, including in relation to seasonal pressures (e.g. hot days) or particular times of day (e.g. after school lunchtimes). Some of the discussions even conveyed a sense that some litter in parks is excusable, if not acceptable, if people have made an effort to find and use a bin. Reactions to the photo prompts – one which showed small bits of litter on a path, and the other large quantities left near a bin - reinforced this view. Several participants blamed the bins not being emptied, or a lack of bins, rather than the people who leave litter.

There may be a link here with expectations about whether and how often litter will be cleaned up: if it is next to a bin many participants would not worry because they expect it to be cleared away soon. Comments were made in several groups about seeing lots of litter in parks at one time of day then it is gone when they next walk through. As with town centres, if participants thought it was not going to be cleaned up rapidly, their attitudes to park litter may be very different.

3.1.4 Scenic – countryside

Summary

- Even small amounts are unexpected – seen as ‘a lot’ and ‘out of order’
- Litter spoils ‘a nice experience’
- But these are less visited places (and perhaps have less litter) so less concerning, except for those who care about sense of pride for visitor areas

Discussions about litter in the countryside covered both the ‘ordinary’ countryside outside the towns where the groups took place, which participants may visit or drive through regularly, and grander scenic areas of hills and mountains, where visits tend to be more occasional and special. The photo prompts used in the groups covered both types of ‘countryside’.

Participants reported that they do see litter in the countryside, mostly small individual amounts, including cigarette butts, cans, plastic and glass bottles, crisp packets and so on, frequently in hedges or on verges (attributed to drive-by littering), in woodlands, on country paths, or places where people have gone for a day out and taken food with them. Similar litter arising from campers in scenic areas was mentioned as annoying, when it happens, in two locations which are key camping and walking destinations for visitors (Stirling and Perth). These types of item, along with carrier bags, were identified as the most problematic in the pre-task survey, with drink cans and plastic bottles topping the list for countryside, scenic areas and beaches. It would appear that most litter seen here comes from people snacking or eating a meal. Toilet paper was also mentioned, but only once.

Litter was generally considered to be more noticeable in the countryside, even if the amount is small, because it is just not expected and therefore feels ‘out of place’. As with urban parks and greenspace, participants reported that litter here is upsetting because it spoils their enjoyment of clean and tranquil places, which is the main purpose for going there. Many participants were annoyed not only about litter (if they see it) but also at the kinds of people they consider would be responsible for littering in the countryside – described as lazy, irresponsible, and inconsiderate. Feelings about this being offensive behaviour are strongly related to perceptions of intentionality on the part of the person leaving the litter: if it is considered to have been done deliberately it is so much more annoying than if it is thought to be windblown or an accident (no-one commented on where this ‘accidental’ litter might originate from). Strong opinions were often expressed that there is no excuse for it and alternative views were not volunteered (but see section 3.2.3, food on the go).

Flytipping was reported to be particularly annoying in the countryside – both by those who live there and others who pass through - and was often mentioned without prompting. Participants were also shown photos of fly-tipped litter in the countryside which evoked strong responses about it being inexcusable and disgusting. In two of the locations, very specific local problems were identified to do with perceived ‘hot spot’ sites and those thought to be responsible for the problems there.

Participants often voiced concern about, or queried, how often litter is cleaned up in the countryside. Some of their reported worry was related to a feeling that litter would stay there for some time, with the risk that already littered places would attract more litter. An individual’s level of concern about the litter they came across seemed to be related to how long they think it is going to stay there – and participants seemed generally uncertain what to expect or who is responsible when it comes to countryside locations.

That bothers me an awful lot more for some strange reason. Last week we went and climbed Cliff Hill which is a big hill just outside Dumfries and we were coming back down and somebody had dumped a plastic, it was only one plastic bottle but for some reason that bothers me a lot more because it’s rural and it’s the countryside. It’s all about taking your litter home with you. I really hate to see that.

Woman, Rural 2

3.1.5 Scenic – beaches

Summary

- Type matters as much as amount
- Hazardous litter is most upsetting
- Seasonal/weather-related problems
- Some people report improvement in last few years

Beach litter was mentioned or discussed in seven of the groups, including three groups where photo prompts were shown (the two Ayr groups and the second Aberdeen group). It seemed to be an issue of concern to a small number of people in those groups but was not a general issue, although quite strong views were expressed when responses were prompted by the photos. Only one of the litter photos from participants was taken on a beach.

The main problem identified with beaches was litter related to eating and drinking, including fish and chip papers/containers and barbecues, which one person suggested are often left buried in the sand and are a health hazard as a result. Beach litter was associated with nearby take-away food outlets and with seagulls spreading litter from bins and across the beach as they scavenged for food remnants. Several comments related to this being a seasonal or 'hot-day' problem, when visitors from nearby towns and cities visit in large numbers, consume quantities of take-away foods, and bins cannot cope with the resulting rubbish. Participants commented on this rather than finding it particularly annoying; and one person suggested it is a difficult problem to manage because it is largely unpredictable.

More generally, a few participants had the impression that beaches are cleaner than they used to be (less broken glass in particular) or do not have much litter on them. Problems related to litter washed onto beaches from the sea were mentioned in three of the groups without prompting, where it was flagged as a significant problem. The further connection between marine borne litter and its origin at least in part from items dropped on beaches was not typically made.

Responses to the photo prompts of broken glass and cigarette butts on beaches demonstrated that the type of litter on beaches matters as much to people as the amount. Broken glass was felt to be particularly unacceptable here, because of the risk from people walking in bare feet and children playing in the sand. Emotional reactions to the pictures were sometimes quite strong, including feelings of outrage and disgust, even though participants may not have much experience of the litter type in question. Some of the sense of outrage was again related to feelings that someone had deliberately chosen to litter, which showed they were careless of other people's welfare. As with glass in parks, teenagers drinking at night were held responsible by some participants.

3.1.6 Roadside and lay-bys

Summary

- Associated with 'on the go' snacking and fly-tipping
- Car parks as well as lay-bys and verges
- Some concern about how long litter will remain & risk of attracting more leading to unacceptable accumulation

Many participants reported they commonly see litter in lay-bys, especially those in the groups where photo prompts of lay-bys were shown¹. Even quite large amounts of litter were described as 'normal' and participants who had an opinion often had the impression that bins are usually full or over-flowing in lay-bys. It should be noted that some groups were specifically selected and prompted on roadside litter, while in others it was only discussed in detail if it was brought up spontaneously by the group.

A few mentions were made of litter on country roads (e.g. in rural groups) where people are assumed to have thrown things out of their car window but this was not brought up by many people in the

¹ Annex 7.7 shows which photo prompts were used in which groups.

groups. A couple of mentions were made of litter on roads and verges next to 'tips' (household waste sites) in semi-rural locations. Bus stops were mentioned as litter locations in three groups, as places where people congregate and are likely to be eating in transit, or where young people hang about at night drinking. Some participants felt bins may not be available in these locations.

Participants associate litter in lay-bys and other roadside locations with eating or drinking on the move. Fast food cartons and plastic bottles and cans were rated the most problematic in the pre-task survey and they were often mentioned in the groups. Plastic carrier bags, sweet and crisp wrappers and cigarette butts were also ranked high in the survey. This kind of littering was variously described as lazy, disgusting or disrespectful. Some who did admit dropping litter out of cars thought it was acceptable if it wasn't in 'their' area (see further evidence in section 3.2.3, food on the go). Wind-blown litter from farms was mentioned in one of the most rural groups as something that is often seen.

Some participants had a perception that litter in roadside locations is likely to attract more litter because it may stay there for longer periods of time than in town centres. This perception is related to uncertainty about how often roadside locations are cleaned. While participants who use lay-bys can be annoyed if they find full bins and their surrounds littered, and flytipping is especially aggravating (see section 3.3), roadside litter did not appear to be of significant concern in general. Some people in the groups mentioned issues to do with hot days or busy days and how often bins are emptied, with a perceived risk of litter left by bins being strewn by the wind along the roadside. These feelings also relate to impressions that bins in lay-bys are often full.

3.1.7 Trackside

Participants showed relatively little concern about trackside litter. It was rarely mentioned spontaneously (one group) and those who were shown photo prompts did not seem to be especially offended by it. Those who did have an opinion tended to say it was expected or normal, especially in big cities, and was the railway company's responsibility to manage.

3.1.8 Other locations

A number of other locations were suggested where some participants experience litter as a problem. One of those most commonly mentioned could be described as 'inter-zones' between town and city centres and purely residential areas. Participants submitted 44 litter photos (out of 378) taken in urban locations outside city or town centres. These might be main roads leading out of towns, back streets off town centres, roads that people walk on to get home from town centres or mixed commercial/residential areas. They can include what were described as 'corners' where wind gathers accumulations of litter from elsewhere, building sites, or 'out of the way' urban sites that can attract flytipping. Derelict sites and waste-ground were mentioned in two of the urban groups as being 'dumping grounds'. A few participants had the impression that these types of off-centre, non-residential locations, receive less cleansing attention from councils, but no-one mentioned the role of private landowners.

My street is more of a side street rather than a main street and you see the cleaners going round the main streets, but they leave the side streets, but because it's a thoroughfare to the train station you get all these people throwing things in your garden.

Man, Urban 3

Some participants appeared to be particularly aggravated by litter which they believed was the fault of school children, most notably routes between schools and food outlets after lunchtimes, or nearby parks, with the occasional comment that councils should not have to pay to clean up this kind of litter. A couple of people (in different groups) also mentioned entrances to hospitals as being worse than town centres, notably for cigarette butts and food-related litter.

W: I was up at the hospital at the weekend and at the entrance there was crisp bags and everything and when I walked in I went, "that's a mess." A hospital is supposed to be clean and tidy and the rest of it but it was really quite messy.

Woman, Mixed 1

Car parks were also mentioned as places where litter can be a problem. This is covered under food on the go in section 3.2.3

The fast food places as well, you finish it and just drop it as soon as you get out the door you don't go back in and put it back in the bin or whatever. The McDonalds drive through there's a lot of litter on the side and in the car park. The car park isn't just for McDonalds the car park is just full of the brown bags and stuff like that. Because people just park up eat it and then throw it out the window.

Man, Urban 3

3.2 Types of litter

3.2.1 Cigarette butts and cartons

Summary

- Described as 'everyday', 'everywhere' litter – people may become 'immune' to seeing it
- Associated with town and city centres, especially around pubs, offices, eating venues etc. (smoking ban blamed)
- Opinion divided over acceptability of behaviour or impact
- Some won't carry to a bin; some incorrectly see drains as acceptable disposal route

Cigarette butts were rated as most problematic in town and city centres in the pre-task survey (85/107 respondents described them as a fairly or very big problem there) and least of a problem in residential areas. More than half the respondents also rated smoking litter a fairly or very big problem in parks and at roadsides.

Participants often suggested this kind of litter is very localised – pubs and offices were mentioned; one person identified it as a problem at hospital entrances. Participants felt that people make less effort to dispose of butts properly the more alcohol they drink. Some also suggested that smokers may not use the containers provided because they are required to stand some distance away from buildings, hence scattered cigarette butts on pavements around pubs or offices. A few people happily admitted they would do that, either because they forgot when they were drinking, or they couldn't be bothered to carry butts from where they had been smoking to stubbing containers or bins, or they were walking and did not see a bin (or drain). A perception that drains are as acceptable a disposal option as a bin is clearly problematic for both water companies (where waste of various kinds can cause problems in drains, sewers and water treatment processes) and the wider environment (as items may simply be washed into waterways), but no-one raised this as an issue in the groups. One person in one group raised the idea of giving smokers a pouch for transporting their butts but this did not inspire discussion from anyone else in the group.

There seemed to be some difference of opinion about the acceptability of dropping cigarette butts in the street, including amongst smokers. For some smokers it was never alright; for others it was not a big deal. The indoor smoking ban was quite often blamed for a perceived increase in smoking related litter in recent times, including a slight sense from some that the blame lies with the authorities in moving smokers outside rather than smokers' own behaviour.

Fines for dropping cigarette butts were mentioned quite often, especially in one of the urban groups where it seemed to be common knowledge that 'street wardens' can hand out fixed penalties. We know from other evidence that this specific local authority is more active than others in using enforcement powers, so this finding is probably not generalisable. Across the groups as a whole, a

number of people reported they had received on-the-spot fines themselves or knew people who had. Fines in this context were generally thought to be a good thing and accepted even by those who drop cigarettes. A few reported it had changed their behaviour, though this might include being more careful about how they litter as well as being more likely to use a bin. Views on the more general use of fines as a deterrent to littering are covered in section 5.

When my friend got fined he got such a fright, he was outside the shops and he threw his cigarette, and he actually thought the guy was joking and he had to pay £50.

Woman, Rural 1

M: A lot of the time there's nowhere to put your fags out on.

W: Yes if you're out in a park there's not anywhere to put your cigarette ends.

M: You can't smoke inside the pub and you go outside the pub there's never anywhere. There's ashtrays inside the pub but if you're walking to get a taxi halfway there there's nowhere to put your fag.

M: You try and find a drain but if you don't find a drain then you just drop it. That's the way I do it.

Mixed 5

I think there's a lot less fag butts lying about than there used to be. There's still loads flying about but there's a lot less probably because of the fines as well, because I smoke and occasionally you throw a fag butt away but now you're more careful and you put them in the bin usually

Man, Urban 3

Cigarette butts and cartons

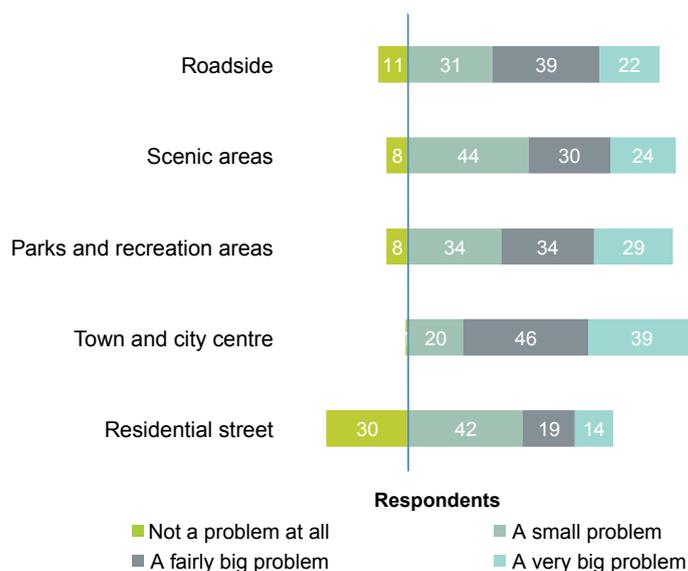


Figure 9 – How participants felt about cigarette butts and cartons in different locations (Pre-task survey)²

² Please note that, while 107 people completed the pre-task survey, non-response and 'no opinion' have not been included in the charts in this section for purposes of clarity. The full question wording and data are included in Annex 7.3

3.2.2 Chewing gum

Summary	<ul style="list-style-type: none"> • ‘Everyday’ litter – categorised as similar to cigarette butts • Really annoying for some, not an issue for others 	<ul style="list-style-type: none"> • Some sense of people becoming immune to seeing it • Concern about the cost-effectiveness of clean-up
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Chewing gum was most often identified as a problem in town and city centres where those who talked about it described it as ‘being everywhere’ or like pebbles on the ground. In the pre-task survey, 79/107 respondents rated chewing gum in town and city centres as a fairly or very big problem, with parks in second place (56/107).

While gum was identified as a key source of litter in urban centres, there was a general sense that many participants are not especially bothered by it and simply accept it is going to be there. A small number were more irritated by it, including one person who walks with a stick who said she finds it mildly hazardous. Others noted specific instances of irritation, when gum had stuck to their clothes or shoes.

In a few groups, there was some discussion around clean-up efforts for chewing gum. Some were aware that their council uses special equipment or machines to deal with it while others were unsure whether it was ever cleaned. A few comments were made about the cost of cleaning up chewing gum and whether it is affordable. Queries about affordability seemed to be related to local stories about the cost of the machines used by the council.

I think you’ll find that chewing gum is one of these things that although it’s litter you kind of get used to it. You don’t walk around thinking “Oh my God look at all that chewing gum”, it’s part of the ground.

Man, Urban 2

W: Chewing gum I don’t see why they spend so much money getting chewing gum off the floor. If it’s already hard and stuck to the ground it’s not going to come off, the rain is not going to make it come off and you see them out there for ages with the steamer scrubbing it off. And for me chewing gum is not a big problem.

M: To be honest by the time it’s that hard and that trodden into the ground it’s not really a major issue

Dialogue, Mixed 5

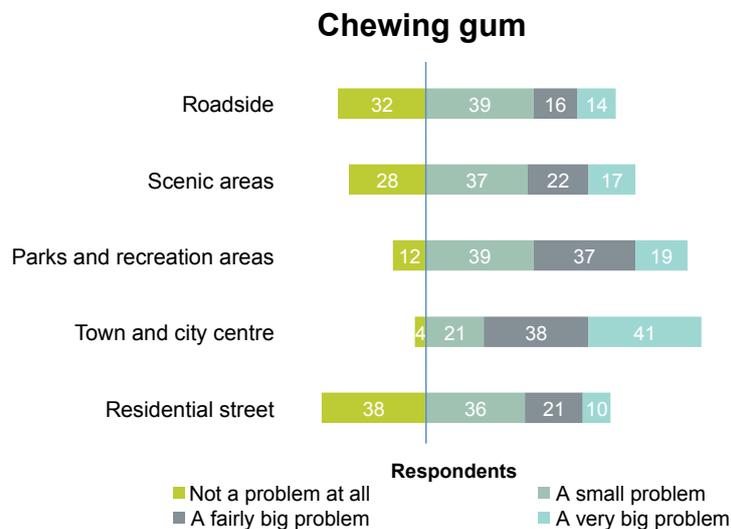


Figure 10 – How participants felt about chewing gum in different locations (Pre-task survey)

3.2.3 Food on the go

Summary

- Reckoned to be a significant problem
- “Kids” typically blamed
- Effective cleaning mitigates level of concern
- The behaviour is often as upsetting as the litter itself
- Some people admit throwing food-related litter from cars (in contrast to most other behavioural areas that came up in the groups)

Litter arising from eating on the go includes drink cans and plastic bottles, crisp and sweet wrappers as well as food containers and leftover food from take-away fast food restaurants. It was a hot topic of conversation in the groups and widely reckoned to be one of the biggest litter problems of modern life. It often evoked strong emotional responses because of the narratives and explanations that participants attach to the causes of this kind of litter, which strongly influence their reactions and perceptions. In this particular case some very judgemental attitudes were expressed about people who eat fast food regularly, about young people, their values with respect to others and society at large, and education. Only a small number of participants admitted to dropping this kind of litter, mainly in the younger groups and a few people suggested that dropping ‘small bits’ (e.g. sweet wrappers) is acceptable. It is important to acknowledge these strongly held views, even if they are not entirely backed up by evidence on who causes litter or why³, because they will influence how people respond to information and communications around litter policies.

It is also an emotional topic for some people because of the knock-on impact of attracting seagulls, which were blamed for spreading litter over wider areas, blighting pavements and cars with their droppings, occasionally attacking people who are eating outdoors, and generally being unhygienic. Someone described them vividly as “flying rats”. A few people also mentioned their disgust at accidentally treading on cartons containing leftover food, especially where some of it was liquid.

Eating-related litter was felt to be a problem everywhere, most especially in urban centres and on the roadside or in lay-bys. A large majority in the pre-task survey rated fast food containers in those locations as a fairly or very big problem (84/107 and 70/107 respectively). It was considered a lesser problem in residential areas (where a minority in the survey rated these items as a fairly/very big problem) and more to do with wrappers and drink containers than food cartons in those places. Many participants also expressed their irritation at this kind of litter in parks and scenic areas (which matched the pattern of pre-survey responses), and in places where school children congregate or walk, notably routes from local shops to schools.

In town and city centres participants said they notice concentrations in particular places, notably around take-away outlets during the day (cafes and sandwich shops were often mentioned) and at night. A link was commonly made between the evening economy of cities and littered fast food containers: some suggested that people forget their usual ‘good’ behaviour when they have been drinking or are willing to make less effort than usual to find a bin. A small number of people suggested that take-away food outlets (including sandwich shops and cafes as well as quick service restaurants) should have a responsibility to control litter originating from their premises.

Eating-related litter linked to drivers was the other main source of irritation for those who had strong views on this topic. It was often described as ‘disgusting’ behaviour and in quite judgemental terms about the people who had done it. As with other sorts of littering considered to be anti-social, “kids” quite often drew the blame, being linked to them sitting out in their cars at night with friends (similar to complaints about drinking in parks at night). Where the discussion focused on litter in lay-bys the degree to which it was felt to be deliberate seemed to make a difference to how strongly participants reacted. Deliberate dumping of fast food litter in car parks – for example on retail parks with drive-

³ Zero Waste Scotland, Rapid Evidence Review of Littering Behaviour and Anti-Litter Policies, <http://www.zerowastescotland.org.uk/sites/files/zws/Rapid%20Evidence%20Review%20of%20Littering%20Behaviour%20and%20Anti-Litter%20Policies.pdf>

thus, supermarket car parks, or other car parks near fast food outlets – was also cited as a problem behaviour that was seen quite often. A couple of people also claimed they had seen taxi-drivers dumping food cartons and contents on the street, which they found completely unacceptable.

It became clear in one of the younger urban groups that those who had admitted to dropping ‘small bits’ of litter also sometimes dropped fast food litter out of their cars, either on the move or in car parks. The tone of the conversation on this topic was jokey and no-one seemed upset by this littering behaviour. The main justification appeared to be people wanting to get rid of ‘stinky’ items as quickly as possible after eating and dumping them was the easiest option, an attitude that was also seen in previous research by Zero Waste Scotland on attitudes to littering from vehicles. One person mentioned they would do it if they thought they wouldn’t be seen. It was not clear whether those respondents would have walked to a car park bin even if it was provided. In lay-bys, over-full bins were often blamed for litter being left behind.

M: I throw litter, banana skins out the car.

W: I wouldn’t throw it out the window but I don’t drive so if my mum is parked somewhere and I was eating a McDonalds or something I would just open the door and put it down and then close the door.

W: I throw it out the window without my mum watching me in the mirror, she’d go mental.

M: Just stuff like coffee I’ll throw the coffee out and keep the cup stuff like that. So I’ll throw the apple core out and stuff like that but I wouldn’t throw a whole bag of McDonalds or things like that

Urban 3, part of a much longer discussion about throwing litter out of cars

M: I’ve seen boys sitting in the car park at Kentucky Fried Chicken and this young couple with two kids were sitting in their car eating their food. The girl was in the front seat and she got out and accidentally dropped the rubbish but she just left it and drove off. She could have put it in the bucket but she actually dropped it.

Man, Mixed 4

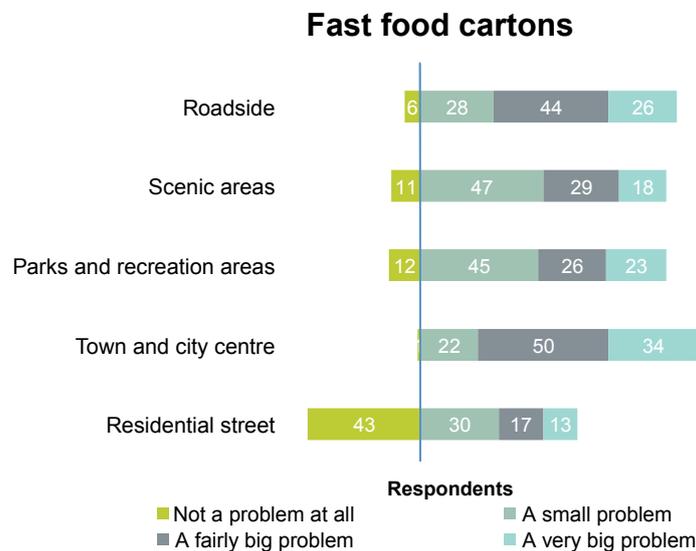


Figure 11 – How participants felt about fast food cartons (including uneaten food contents) in different locations (Pre-task survey)

Sweet wrappers and crisp packets

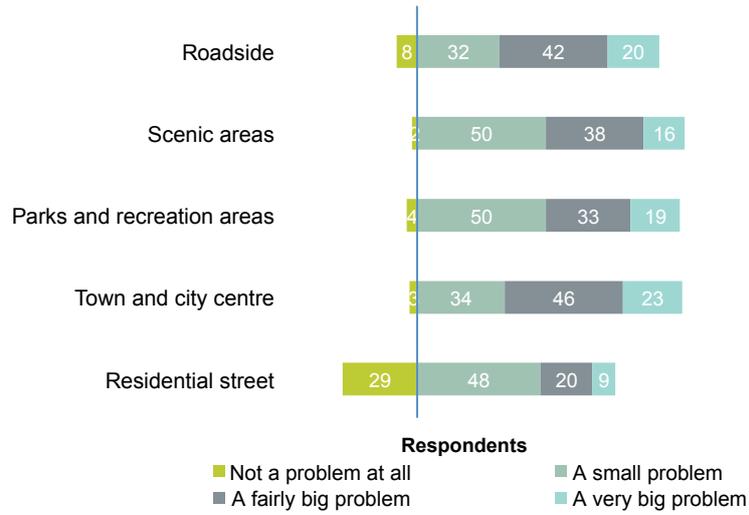


Figure 12 – How participants felt about sweet wrappers and crisp packets in different locations (Pre-task survey)

Plastic soft drink bottles and/or soft drink cans

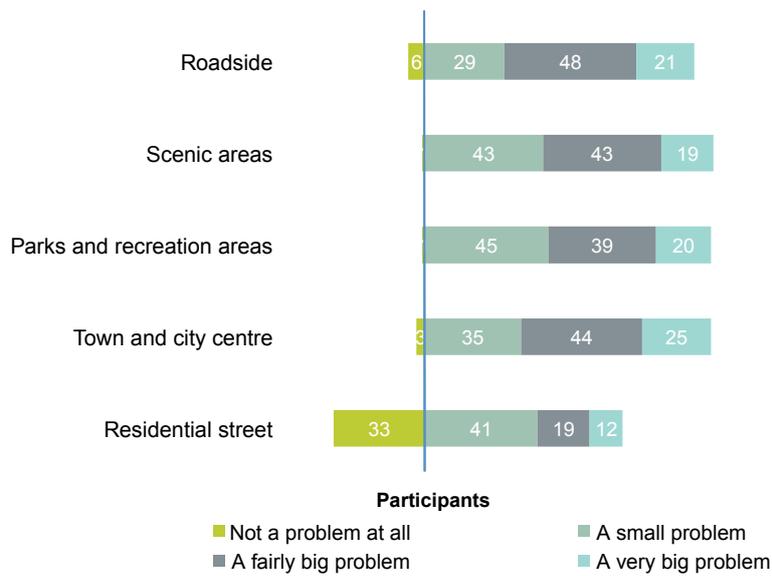


Figure 13 – How participants felt about plastic soft drink bottles and/or soft drink cans in different locations (Pre-task survey)

3.2.4 Glass bottles (and broken glass)

Summary	<ul style="list-style-type: none"> • Concern is about hazard and not amount • Especially in parks, beaches & other recreation spaces 	<ul style="list-style-type: none"> • Upset not only about the litter but also attitudes and behaviour of those assumed to be responsible – tied up with wider feelings about young people
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In the pre-task survey a majority of participants identified this type of litter as a fairly or very big problem in all except residential areas. Specific individuals in the groups reported they have continual issues with broken glass on their street which they found very upsetting, but this was not the general experience.

Participants’ principal concern is to do with health risks rather than the amount of glass litter per se. It was most often mentioned with respect to places where people walk regularly (e.g. with their dog) or go for recreation – beaches, parks, green spaces (e.g. by the river) and the countryside proper). Fears about risks to dogs and children fuel participants’ responses to this kind of litter. In one of the city groups, the puncture risk from glass on the roadway was also mentioned as was the nuisance of (perceived) teenage drinking at bus stops and associated broken bottles.

“Kids” – teenagers and youths – were largely seen as responsible for this kind of litter, it being an outcome in places they congregate to drink and socialise at night, though common perceptions may not relate to who actually causes this litter in all cases. Feelings about this kind of litter also involve emotions about the kind of people who are thought to be doing it. It seemed that those who found it upsetting were sometimes upset as much by the behaviour as the litter itself. It was often associated with lack of respect for others, being irresponsible and there being “no need for it”. The role of adults (including drivers) in contributing to this kind of litter was almost never mentioned.

M: I think in the parks you get young people going up for a drink and that and then they’ll drop their bottles and leave them, then there’s kids going in and playing in the swing parks and there’s glass there.

Urban 3

Glass bottles (including beer or wine bottles)

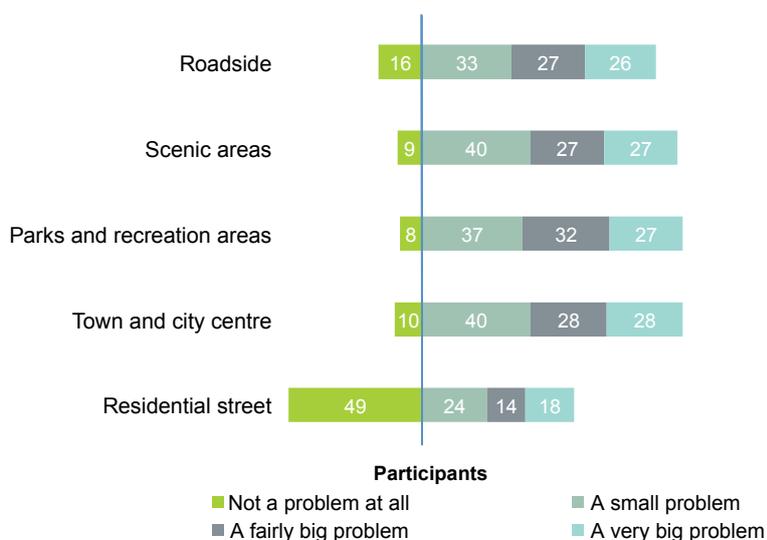


Figure 14 – How participants felt about glass bottles (including beer or wine bottles) in different locations (Pre-task survey)

3.2.5 Plastic carrier bags (Single Use Carrier Bags, SUCB)

Summary

- Most noticeable at roadsides & lay-bys
- Filled, dumped bags more annoying than 'windblown' bags
- Did not appear to be a big concern compared to other items – except for fly-tipped waste in carrier bags

This was expected to be a much more common topic of conversation than it turned out to be because research specifically on carrier bags has identified litter as a public concern⁴. It was frequently mentioned in the groups but often almost in passing rather than as something that really irritates participants. This finding was at odds with the pre-task survey where carrier bag litter was generally rated as a fairly or very big problem by a majority of participants, particularly in roadside and lay-by locations. The difference is likely to reflect the high level of response that may arise when questions are prompted: when asked directly if it is a concern, respondents tend to rate it so, yet it may not be as top of mind in unprompted discussions.

Roadside locations were mentioned in the groups as places where plastics bags were seen, either single "windblown" bags or bags filled with other rubbish that have been dumped. Where it was mentioned, participants seemed to be more disgusted by dumped bags than single bags on their own in trees or hedges which appear to be more excusable because people can't be sure they have been littered deliberately (no-one speculated where or how 'windblown' litter may have originated).

The odd comment was made about bio-degradability with respect to carrier bags to the effect that they would be less of a problem if they decomposed naturally. A carrier bag charge in Scotland was mentioned only once.



Figure 15 – How participants felt about plastic carrier bags in different locations (Pre-task survey)

4 Exodus Research for Welsh Government and Zero Waste Scotland. Behaviour study on the use and re-use of carrier bags 2012: a review of shopper perceptions and usage of single use carrier bags, bags for life and other containers in Wales and Scotland.

3.2.6 Drug related litter, including needles

Summary	<ul style="list-style-type: none"> • Very distinct from normal litter • Strong visceral reactions – though items not typically seen in daily life 	<ul style="list-style-type: none"> • Strong reactions were most likely primed by the pre-task survey • Local news stories and ‘my friend’ accounts also fuel concerns
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It became evident that participants’ responses to drug related litter were heavily primed by including it as an item in the pre-task survey and the sort exercise. When probed, it was clear that most participants never or rarely see this kind of litter – but if or when they do it is concerning to a degree not associated with any other litter type. Even those who never see it were frightened simply by the thought when asked to consider it. It is likely that such fears underpin the responses to drug litter given in the pre-task survey, with many participants projecting how much of a problem it would be in different places if it were to be seen there. Though all participants were alarmed at the idea of drug-related litter, there was a strong sense that it is not a widely experienced day-to-day problem.

Conversations almost always focused on discarded needles rather than other drug related litter (though one person in the post-task survey associated it with used condoms, as a combined problem). It was rare to have direct experience of discarded drug needles and participants tended to associate drug problems (and attendant litter) with cities, though a small number of participants felt it is a problem that is spreading out from cities. One man noted a link to steroid use and the usefulness of needle exchanges in that context.

Public toilets and drains were mentioned as places where needles and other drug equipment have been seen, also around communal bin areas for flats or tenements. There was some complaint in one location that public toilets had been closed as a result. A couple of people associated more general litter problems in their area with proximity to places offering drug treatment, either special centres or chemists. There were also occasional stories of people finding needles in garden hedges or hearing friend-of-friend accounts of needle stick injuries. From what was said, it seems likely that some of these accounts came from local news stories but it nonetheless fuelled participants’ fearful reactions when the topic was brought to their attention. Research into the indirect costs of litter by Zero Waste Scotland supports the contention that while the actual incidence of harm from discarded needles is exceptionally rare, people are extremely concerned – this is understandable given the potential consequences.

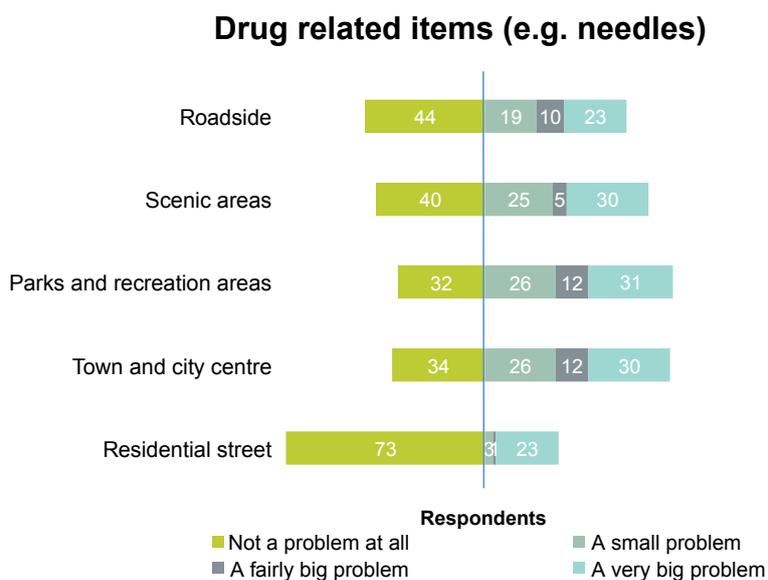


Figure 16 – How participants felt about drug related items (e.g. needles) in different locations (Pre-task survey)

3.2.7 Banana skins, apple cores and similar items

Summary	<ul style="list-style-type: none"> Least likely to be considered litter Even some who are most opposed to littering find it acceptable in green spaces and may drop it 	<ul style="list-style-type: none"> Perception of lack of hazard from its bio-degradability is key to attitudes Bio-degradability never mentioned with respect to other food-related litter
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Not everyone shares the same view about these types but, on the whole, they tended to be seen differently from other kinds of litter. This was illustrated in the pre-task survey by the small number of participants who said these items were a fairly or very big problem (ranging from 14/107 in residential areas to 33/107 on roadsides). There were many discussions, often during the sort exercise, about this littering behaviour not being seen as an issue. Participants justify their perception on the basis that the items are biodegradable and therefore not believed to be a threat to wildlife, the environment or people. A few participants went further to suggest littering is actually beneficial because rotted fruit debris helps to nourish 'nature'. The disamenity to others of this kind of litter was rarely mentioned.

For some participants, the idea of 'degradability' makes litter feel less unacceptable; a few people also mentioned this characteristic in relation to plastic bags or paper. Notably, however, bio-degradability was not mentioned with respect to food waste from food on-the-go, which was always seen as unpleasant and a problem. Fruit-related litter was largely seen as acceptable as long as it is in the "right place" which generally means in hedges or grass verges but not on pathways or pavements.

This is the one category of litter that people seemed more comfortable to admit to dropping, including those who had strong views about other sorts of litter.

M: I think it depends if it was lying in the street or something it's annoying but if it's in a hedge or something or in a field it's not too bad.

M: You're helping nature exactly. Flies and that get food from it.

Dialogue, Mixed 1

Banana skins, apple cores and similar items

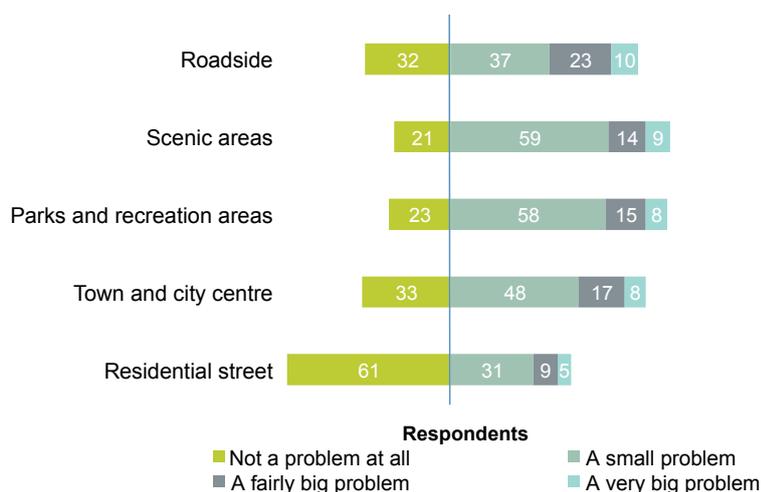


Figure 17 – How participants felt about banana skins, apple cores and similar items in different locations (Pre-task survey)

The perception that these items are less serious is not necessarily supported by other research. Items dropped in areas cleaned by local authorities will still be picked up, adding to the cleansing burden - and in the interim, or in areas without a collection (such as the countryside) they are just as ugly and unsightly as other litter items as they lie on the ground. Whilst some may be consumed by wildlife, in a

city environment, this may not be welcome (see for example earlier comments on seagulls) and in the countryside can encourage non-local species at the expense of more local wildlife. Finally, while items will biodegrade eventually, this can be a slow process – for example a banana skin will take two years to decompose in Scotland’s upland environment.

3.2.8 Newspaper and scraps of paper

Summary	<ul style="list-style-type: none"> • Not usually differentiated from general everyday litter • Exception was paper left behind after domestic refuse collections: where it happens it can be very annoying
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Very little interest was expressed in paper as a litter item, even during the sort exercise when it was prompted. This finding is slightly at odds with the pre-task survey in which nearly half rated newspapers or scraps of paper as a fairly or very big problem at roadsides and town centres. Once again, this most likely reflects the differences arising from prompted and unprompted research approaches. On the basis of the wider discussions it seems likely that participants are identifying paper as just part of the mix of general litter in those locations, which does engage them (which is not something the survey could have picked up). One person suggested paper litter was a diminishing problem because far fewer newspapers are read than previously (though he did not mention free newspapers in large towns/cities).

There is one specific occasion when some participants said they are irritated by paper litter, which is in relation to domestic refuse collections. Those who were animated by this theme cited paper ‘blowing around’ on collection days and some also noted that paper can escape from recycling containers. Only 18 of the 107 survey respondents, however, rated paper as a big or fairly big problem in residential areas, so it seems unlikely to be a generalised problem.

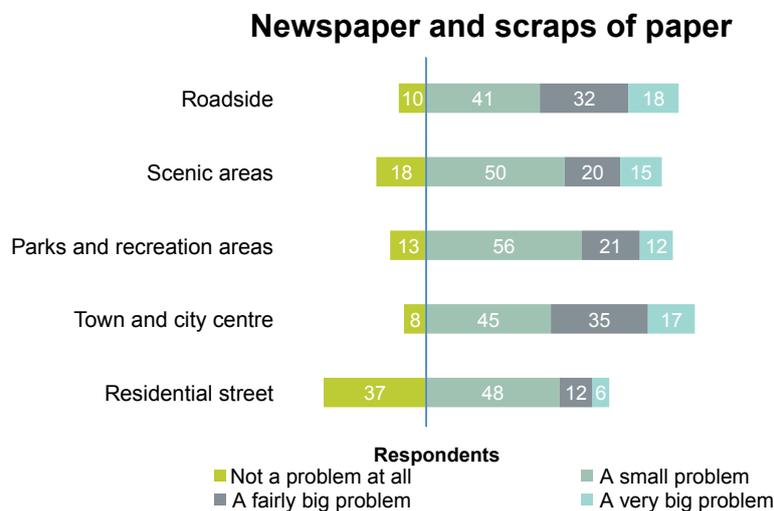


Figure 18 – How participants felt about newspaper and scraps of paper in different locations (Pre-task survey)

3.2.9 Dog fouling

Summary

- Always mentioned: seen as inseparable from litter as an amenity problem
- Discarded dog poo bags are also a concern and widely reported
- Rated a significant problem where it occurs in residential areas and everyday leisure spaces

Dog fouling was included in the pre-task survey but was not prompted in the group discussions. Even so it was a frequent and often animated topic of conversation. Some participants were quite annoyed that it had not been included in the sort exercise because they thought it was a much higher priority than some of the items that were covered.

Dog fouling is a very 'close-to-home' concern, unlike many other litter issues. It ranked only below crime and equal to the state of the pavements/roads in the factors contributing to quality of life that were included in the pre-task survey. The experience of the 107 participants was spread between those who thought the amount of dog fouling in their area was good/very good (32), acceptable (30) and poor or unsatisfactory (45). It appeared to be more of an issue for older people and those in the C-E social class groups (including younger people in the groups living in urban areas) but there were people in most groups who were annoyed by it.

Among those who find it upsetting, dog fouling evoked strong opinions that it is completely unacceptable and irresponsible. This seemed to be the accepted social norm and no-one openly said they let their dog foul. Dog mess in residential areas, parks and green play spaces was particularly a nuisance that many participants reported. Health risks to children playing outside were a common concern. A landscape gardener reported his job was blighted by the amount of dog mess he has to deal with when cutting grassy areas. Another woman was trying to organise a yellow flag event to highlight dog fouling to residents on her estate and the impact on children's' play space.

While no-one admitted to letting their dog foul, during the sort exercise one group of women hinted they would allow it in woodland away from the main path as it would not represent a hazard there. Some of the comments made about a lack of dog poo bins in various groups were also suggestive that some people excuse themselves from picking up dog mess if it feels too inconvenient. A few people questioned or commented on how far people should be expected to walk carrying a dog poo bag when it is something you want to get rid of quite quickly. There was some sense that people feel they have done their bit if the dog mess is bagged and it isn't really their fault if they can't find a bin easily. Some participants reported dog poo bags to be a growing and irritating source of litter which, some people remarked, often seemed to end up in trees. Availability of special bins was a common theme in those discussions.

There's also a tendency, I don't understand the mentality, people pick up the poo with the wee bags right, tie a knot in it and then they must carry it so far and then give it a throw. And there's actually an area that's under the castle and my kids call it the poo tree because there's all these wee bags hanging from the tree in the winter. You cannot see it in the summer because it's all green but in the winter you can.

Woman, Mixed 5

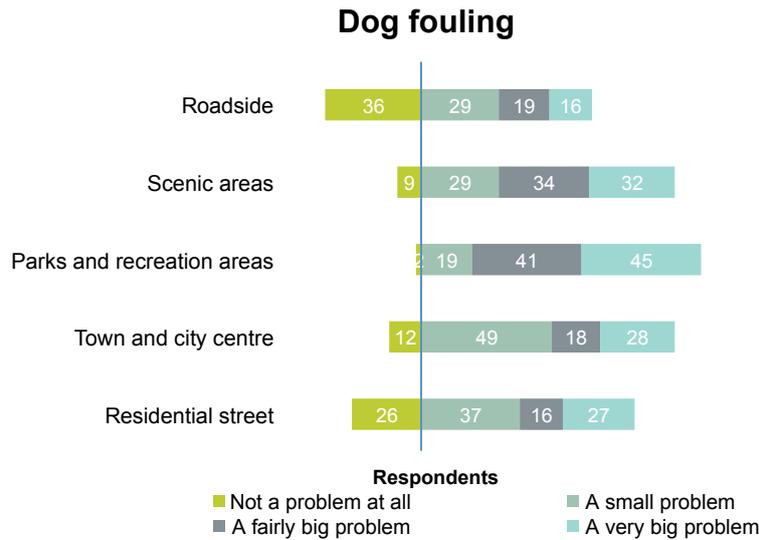


Figure 19 – How participants felt about dog fouling in different locations (Pre-task survey)

3.3 Flytipping

Summary	<ul style="list-style-type: none"> • Considered different from litter – because of intent behind it • Assumption of deliberate intent and forethought makes it feel outrageous 	<ul style="list-style-type: none"> • Dumped bags of household rubbish are upsetting, as well as single large items • Charged-for bulky-waste collections often flagged as cause/excuse
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Flytipping was raised spontaneously in most groups, often as part of the opening discussion about what participants like and dislike about their local areas. Prompted discussions about litter in the countryside and roadside frequently involved flytipping; and it often came up in the sort exercise when participants were considering how to categorise different types of litter, although “flytipping” itself was not offered as a sort item.

Participants talked about seeing flytipping in a variety of places: outside villages, in grassy and wooded sites in the countryside with easy road access, in lay-bys, near communal bins on estates, on derelict sites in cities, on the street (especially in flatted areas), and sometimes outside council recycling sites (“the tip”) where it was thought those who are refused entry have immediately dumped their waste. Common impressions were that it happens where people think they won’t be seen; and if it stays there for any amount of time it will attract more litter and flytipping.

There’s always hotspots to flytipping. You drive past the same place and you see something been fly-tipped and then a month later you can go past that exact same place and someone has fly-tipped again. There seems to be a hotspot, maybe because it’s out the way, you can park your car there quite easily to get it dumped I don’t know.

Man, Mixed 3

Q: OK so you see things been dumped.

W: Yes like illegal fly tipping basically there we go again. People dumping things because they think it’s not going to be seen.

M: I won’t get caught. Probably a shorter distance to the tip.

Urban 2

On the whole, participants felt that flytipping is different from litter. They were not always sure how to define it, however, and there were occasional disagreements about the boundary between litter and

flytipping. Furniture and household appliances dumped anywhere were always identified as flytipping. Some participants defined it more broadly in terms of 'things you should take to the tip' that have been dumped somewhere else, including bagged garden waste. Commercial waste, notably building waste, was also associated with flytipping. Beyond that, there was some nuance in what else participants thought should be included. Most of those who had a view said any quantity of bagged household refuse (black sacks or tied carrier bags) not in domestic bins while a few thought that large amounts of 'ordinary' mixed litter left in certain places (countryside or roadside) counts as flytipping. Deliberate, planned dumping was also a key component of participants' definitions of flytipping, in contrast to 'accidental' or opportunistic littering.

What is fly tipping?

W: If you drop a crisp packet in the country and you think nobody's seen you that's being fly.

W: I don't think of that as fly tipping I think of it as littering.

W: Fly tipping is when people are just trying to dispose of big amounts of rubbish.

Mixed 1

M: I think I would have agreed with you prior to the discussion like fly tipping is you're dumping your wardrobe and things but having thought about it this evening I think if somebody purposely goes out to take rubbish either from their home or clear their car out, bags it and throws the bag that to me is probably fly tipping.

W: That's my understanding of fly tipping.

Rural 1

M: Anything you can't easily stick into your normal bin is fly tipping. If you can't put it in your bin and you can throw it over somebody's wall that's fly tipping.

Rural 2

W: It could be the fact that for whatever reason you're cleaning your house and something and you've got lots of black bags full of rubbish and instead of putting it into your own bin you take it away and just leave it somewhere.

Mixed 1

W: I think flytipping is your bigger items, your big bags of things. Sweet wrappers and bottles, is just general litter.

W: Sometimes people do that unconsciously, flytipping is a planned event.

Glasgow 2

Flytipping was a prominent case where participants wanted to attach narratives about why the situation had come about, often so they could apportion blame and offer judgement on the people they thought were responsible (typically people who they identify as different from themselves, in terms of outlook and values). A couple of city residents (in different groups) also believed that short-term rental flats contributed to the problem because, they thought, landlords did not want to take responsibility for furniture left behind when residents move out. A couple of people mentioned garden or household waste being taken away by private contractors or odd-jobbers and whether it is disposed of properly. But the most common discussion around the causes of flytipping related to council waste services, either restrictions at the local recycling centre ("tip"), issues to do with bulky waste collections, or (for a very few people) changes in the frequency of refuse collection or charging for garden waste collections. In some cases these factors seemed to be considered as possible excuses for the behaviour.

.... They'll only dump special bags which you have to buy. People aren't going to do that, some people yes maybe will, I won't, I don't fly tip I take stuff on a Sunday morning to the dump. I've got a little trailer and we fill it up, and excess rubbish we take it to the recycle place. But I'm quite sure there's some people who think oh I've got half a black bag here I'll put that by the bin on the by-pass nobody will know who has done it and I won't have to pay for my bag.

Man, Rural 1

A few participants who run small businesses (notably in two of the rural groups) complained that they could not take their own household items to the local recycling centre because their work vans are also their domestic vehicles and any commercially identifiable vehicles are banned. This could also apply to unmarked trailers that ordinary households might use, another said. Across the groups more generally, small companies not being able to use recycling sites was mentioned as a cause of flytipping, with some sense of sympathy for those responsible. Participants were occasionally mystified as to why councils would want to discourage recycling by these businesses by excluding them from municipal recycling centres or charging them for entry.

Even more often there were discussions about household bulky waste collections, where the blame for flytipping was often directed at charges made by councils for collections. For some participants at least, this made flytipping understandable, even if it is annoying.

Conversations about bulky waste collections seemed to be more often abstract than based on personal experience: where it was discussed, participants' knowledge and understanding seemed limited. This was well illustrated in one urban group where the first speaker confidently stated that the council provided one free pick-up a year and charged £40 for each further collection. A participant who had recently phoned the council corrected him by saying the cost was £21 but she had subsequently found someone online who would do it for £10. One person in another city suggested a collection there costs £100. Across the groups, other comments were made about not knowing how long councils would take to pick up items, with a few people having the impression the waste would be on the street 'for weeks', which was upsetting because they couldn't be certain it was going to be dealt with. A few participants worried specifically that items out on streets would attract vandals or other litter.

I've had experience where I've asked the Council to come and remove something but it takes like three weeks or something before they pick it up, and that sometimes causes places to look really messy but really they are waiting just to get picked up.

Woman, Urban 3

While participants often hinted or said they could understand why flytipping happens, they also tended to find it upsetting if they had seen it, notably in the countryside or in roadside locations. (Roadside was the highest ranked location in the pre-task survey for mattresses/furniture being a problem). One of the key reasons for participants feeling upset by flytipping was a judgement that those who do it have made an active choice to flout the conventions that everyone else lives by and to deliberately spoil nice places. The degree of pre-meditation involved seemed to be especially aggravating for

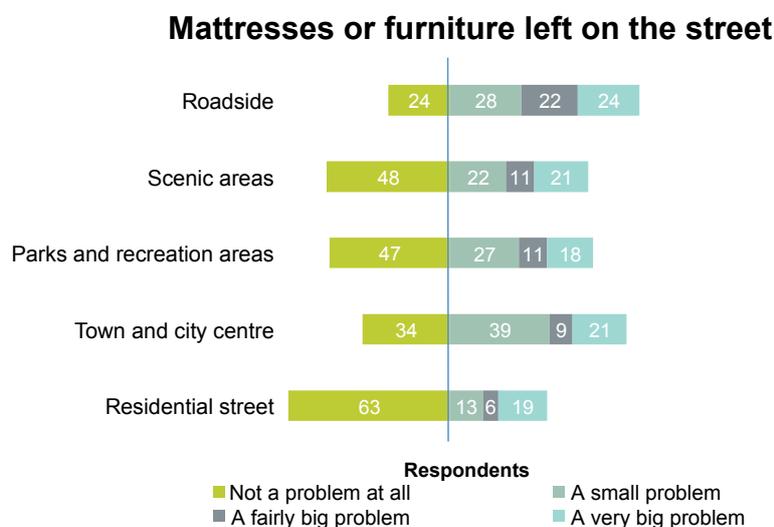


Figure 20 – How participants felt about mattresses or furniture left 'on the street' in different locations (Pre-task survey)

those who had views on this topic. Terms such as deliberate, lazy, disrespectful, disgusting and unacceptable were commonly used.

M: [On defining flytipping] You go out with more of an intent to litter. But if somebody has got rubbish and they leave it, they've went out their way to actually physically leave that rubbish on the countryside. They've actually physically put that in their car.

M: They know exactly where they're going and what they're going to do.

W: Premeditated tipping.

M: Aye. There's no sort of explanation they can give towards doing it. That was intentional from the start.

Mixed 3

4 How concerning litter is: how much, what and where

Following on from the detailed evidence for places and types in section 3, this section addresses the key questions of amount, type and place, which provides a base for the discussion of participant priorities in section 5.

4.1 Reaction to amounts of litter

Towards the last part of the group sessions, participants were shown a set of photographs that illustrated larger and smaller amounts of litter for each type of place prompted (Annex 7.7). Eight different locations were prompted across the 12 groups. To keep the exercise manageable, only residential photos were shown in all groups plus pictures for three or four other places in each group. If the amount of litter came up in the discussion of local areas at the start of the groups it was also probed.

It proved very difficult to engage participants in discussions about the amount of litter – how they would describe different amounts and identify a lot or a little – despite repeated prompting from the moderators. Participants were much more interested in discussing how the situations they were seeing made them feel or why it had come about. Where they did respond to questions about amount it was generally not in any depth and they quickly moved on to other topics. The physical amount, and the boundary between a lot, less or a little, was just not very engaging for them.

Comments on amounts of litter were almost always qualified by judgements about whether it was a lot or a little *for that specific kind of place* based, it seemed, on expectations about what would be 'normal' for somewhere like that (covered in detail in section 3). Comparisons were often made to the effect that the amount seen might be a lot or too much if it was in their street or countryside but the same amount would only be a little in a town or city centre.

W: It is probably not a big amount but because you don't want to see it you do see it.

W: And it is more noticeable.

W: Maybe in the city or the town or in a shopping centre you are busy and you probably not taking it in anyway, it is there but you probably expect it.

M: When you go to the countryside you don't expect to see rubbish all over the place.

Dialogue, Mixed 3

Another major factor affecting perceptions of amounts was how fast participants thought the litter would be cleaned up. Those who worried about a 'domino effect' of existing litter attracting more were anxious not only about the amount present but also how it would increase over time. This could mean that a physically small amount somewhere not expected to be cleaned (e.g. the countryside, roadside or scenic areas) could be described as 'a lot'. On the other hand, a visibly large amount in a place which is cleaned regularly might be considered temporary and therefore not much or 'normal' because it will be gone soon. This applied especially to town centres and littered areas around bins (e.g. in parks). In parks and at beaches the type of litter also mattered to how amounts were perceived (see section 3), where hazardous items in small quantity were often described as 'a lot'.

It's not that much but what it is it's horrible. I mean it's disgusting. It's not a large amount you could put it into a wee bag, put it into a wee bag and just put it back in your pocket.

Woman, Mixed 1, response to beach photo

The fact that there is one broken glass is a problem but it's kind of magnified by the dangerous, it would be different if it was a plastic bottle, but glasses can hurt.

Woman, Mixed 2, response to beach photo

The moderators tried several different ways to elicit views on thresholds for litter becoming 'a lot' or 'too much', without any success. It was clear that such thresholds are very personal and contextual: there was no commonly identified level across the groups as a whole, and often significant differences

of opinion within groups. The only consensus on 'a large amount' was when pictures of unusually large amounts were shown (e.g. in the city centre, roadside or trackside) sometimes accompanied by a comment that they were never or rarely seen. Participants also found it impossible to describe what an improvement in litter levels would look like, though typically noted they would soon notice if it wasn't cleaned up regularly. The research team suggests that participants struggled to imagine improvements because they do not see much litter on a daily basis or pay attention to what is there (as outlined in section 2).

The high degree of nuance in participants' perceptions of amounts was further illustrated in their consideration of residential prompt photos, which were derived from LEAMs to depict different levels of litter. Participants generally found it hard to discriminate between the photos and there was almost no consensus on which represented less or more litter, except for the photo that showed virtually none. One of the difficulties they had was in comparing amounts of litter in residential locations that were not identical. It seemed to be the case that everyone wanted their street to look like the picture with no litter (quiet, suburban) but there was some allowance for litter being present in more urban settings or places that look slightly shabby in general (the pictures with higher amounts of litter).

4.2 How participants categorise litter

4.2.1 *Data generated by the multiple sorting exercise*

Half an hour of the group sessions was given over to a participant-led sorting exercise (described in more detail in Annex 7.1). This was designed to discover how participants categorise litter situations of different types and the underlying perceptions they build from when identifying those categories. In essence, this exercise helps to identify what feels similar and what feels different to participants, and why, with minimal steer from the moderators.

Participants were split into two-sub groups of men and women and given a set of 26 cards to sort, which described a range of litter situations. Some were simply types of litter (fast food packaging etc.) and others were locations with either large or small amounts of general litter (the full list is at Annex 7.5). Using picture cards had been discounted after early piloting because of the apparent distraction of the wider scene in responses to litter.

Cards were sorted three times by each sub-group: twice without any constraint on how they were sorted and thirdly according to their rating as priorities for authorities to tackle. In sorting more than once it is expected that deeper participant-held concepts will be revealed than if only first responses are elicited.

Records were made of each sort: which cards were sorted into which sets and a title offered by participants to describe each set they had created. In total, 70 sorts were completed (two of the Glasgow sub-groups only completed the first and third sorts).

Data from every sort was combined to create a database for analysis across the whole sample. Following the recognised approach for the Multiple Sorting Procedure (MSP) method, the analysis involved the following steps:

- The data generated from the sorts was analysed in software which produces spatial plots of the items that indicate similarity (closeness) and difference (spread)
 - The research team analysed 28 different plots which covered all groups for unstructured first and second sorts combined, structured third sorts combined, and sorts for selected sub-groupings (age, social class, location – urban, rural and mixed)
 - The plots were considered alongside transcripts of the participant conversations during the sorts to provide meaning to the way in which items appeared to be distributed on the plot charts
 - This combination of visual inspection of the plots and qualitative interpretation enabled the team to decipher groupings and categories of litter situations that shared similarities on the basis of participant perceptions
-

The following analysis focuses on the unstructured first and second sorts while third sorts are included in section 5 where participant priorities are considered. Outcomes from the full analysis are captured in the text descriptions of categories in section 4.2.3 while selected plots are included for illustration of key characteristics of participants' groupings (more plots are provided in Annex 7.6).

4.2.2 *How items were sorted by participants*

The sort exercise worked well and was revealing in most groups. A few sub-groups found it difficult, either because they found it hard to find similarities between items, or they felt they needed tighter rules for creating categories, or the dynamic in their sub-group did not work well. On the whole, the moderators had the impression that women tended to find it easier than men and were often quite imaginative. All groups found the third structured sort (ranking by priority) straightforward.

Both male and female groups sometimes set off with one theme in mind (e.g. what we commonly see) and then changed track part way through the sort when a different theme was raised by someone else. Some groups successfully mixed themes within a single sort; others relied heavily on the literal place descriptions and seemed unable to access or share how they felt about the litter situations described.

A wide variety of themes were chosen by participants as a basis for the unstructured sorts. Common themes were:

- what we see (e.g. every-day, often, in different places)
- degree of danger or hazard (to people, environment, or both)
- how annoying it is or how acceptable
- types of place (e.g. that have different litter, feel like different problems, affect us differently).

Interesting single examples included: a journey round our town; the ages of people who drop litter; whether it can be defined as litter; how easy it would be to solve; and whether it is something the council is expected to deal with or a personal responsibility.

4.2.3 *Categories revealed*

The following commentary is based on consideration of the combined results for the first and second unstructured sorts, for the sample as a whole and for selected sub-groups, as well as the accompanying transcripts.

It is important to bear in mind here that the plots on their own do not capture the complete picture of how participants categorised litter and some nuance is lost in aggregating all the sorts into combined first and second sorts. The text descriptions of groupings given below do capture the full analysis, including interpretation of transcript evidence, while the selected plots are included to illustrate a number of the key characteristics identified (more plots are shown in Annex 7.6).

In looking at the plots it is important to bear in mind that they are depicting similarity of litter situations (close together) or difference (far away) and the locations of items on a plot do not indicate relative importance. Ways to read the plots can be illustrated through a few examples depicted in the plot for the first and second sort aggregated for the whole sample (Figure 21):

- The large distance from drug related items and broken glass to other items indicates that these are seen as a very distinct category of litter; the transcript evidence shows this is because participants' have very different feelings about why these items are a concern than for other types of litter
 - The location of 'mattresses & furniture' reflects it being 'pulled' in three different directions in the plots: some groups identified it as concern (actual or feared) in residential areas; others associated it with city centre sites; and yet others with the countryside
 - The top left of the plot represents a grouping that captures participants' description of 'everyday, everywhere' litter. The location of chewing gum and cigarettes butts on the periphery of this grouping reflects the fact that some sub-groups differentiated 'everyday' litter into further categories, including ones where it was decided these two items were of lesser concern
-

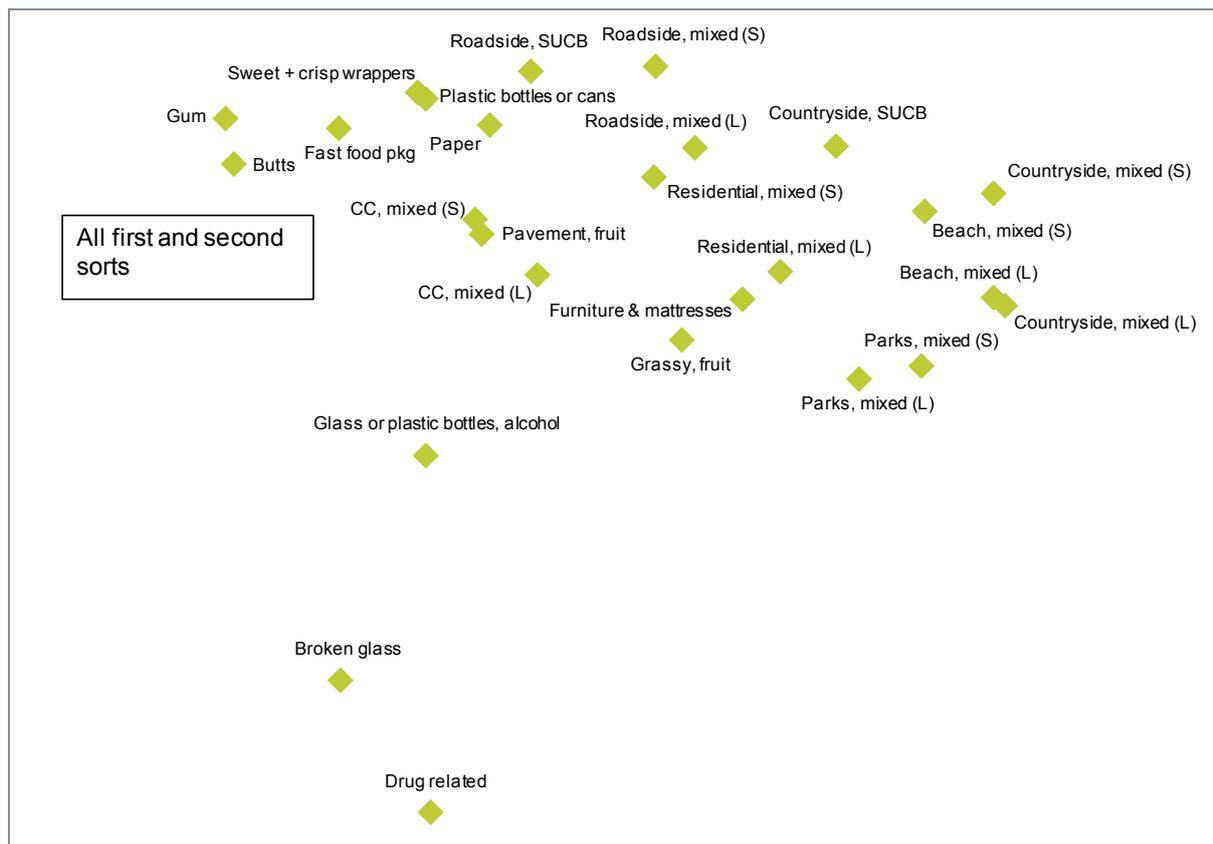


Figure 21 – Multi-scalogram plot of all first and second sorts, aggregated for the whole sample¹

On the basis of the analysis of all the plots and transcript evidence, the following categories are most easily identifiable from the sort exercise²:

- **Drug equipment and broken glass.** These items were typically categorised together and treated as very distinct from ‘normal’ litter because of their hazardousness. Female sorts located these two items as similar but put even more distance than men between broken glass and drug related litter, the latter being seen as an extreme kind of litter. The plots of the female sorts indicated a broader ‘hazard’ group than for men, which also included glass bottles and fruit debris on the pavement, together with broken glass.
- **Glass and plastic bottles for alcohol.** This item was generally placed between the most hazardous category and other litter situations. In some plots (mixed urban areas and SEG:CDE sorts) it could be identified as part of the hazard grouping.
- **Chewing gum and cigarettes.** Gum and cigarette butts were frequently differentiated from other types of litter, most likely because they were often considered less concerning by participants. They tended to be located on the border of a group that could be described as ‘everyday’ litter (see below) in plots for the whole sample and for sub-groups, though with variation in the closeness of the association. These items were distinctively separate for rural participants and women but tended to be put alongside other ‘everyday’ litter by those living in mixed and urban areas, and by

1 Abbreviations are used in the plots: CC= city centre; L = large amount; S = small amount; SUCB = single use carrier bag; mixed = mixed litter of unspecified types

2 In this section the acronym SEG stands for socio-economic group. Groups A and B are higher professional and managerial occupations; C covers clerical and skilled manual occupations; D and E cover semi- and unskilled employees and the unemployed. The discussion groups were recruited to cover broad socio-economic groups, with other filters applied for age, location and various behaviours known to be associated with littering behaviours. More detail can be found in the Annexes.

men. They were more identifiable as a separate category in SEG:CDE plots while they were closer to other 'everyday' litter in SEG:ABC plots.

- **Everyday, everywhere litter.** Participants frequently described a set of items as everyday, common, or even 'normal' litter. This category included fast food packaging, plastic bottles, sweet or crisp wrappers and scraps of paper. Participants sometimes complained about having to choose where to put these items in the sorts because they wanted to group them with all kinds of different locations. The plots placed 'everyday' litter closer to city centres, residential and roadside areas (probably because this is where it is felt to be most noticeable and concerning) and further away from the countryside and beaches, which appeared to be a distinct category.
- **Litter at beaches and the countryside (and sometimes parks).** The emergence of this group as a category appears to reflect expectations about how the presence of litter would spoil the user's experience (as noted in section 3). It might be a less frequent occasion (than, say, littered town centre or roadside scenes) but would be upsetting if it happened.
- **Roadside litter.** This category generally included roadside mixed litter of any amount and plastic carrier bags and was associated with seeing 'everyday' litter. It was located with litter in residential areas in plots for urban sub-groups, and nearby residential in mixed areas, but was placed closer to beaches and countryside in rural sub-groups.
- **Fly-tipping.** Furniture and mattresses represented fly-tipping in the sort exercise. In the plot for the sample overall this item was located close to 'residential area-large amount of litter', which reflects serious concern about this event *if it were* to happen close to home and a perception that it would have a significant impact. In SEG:CDE and older groups (40-65) it was located also close to roadsides; there was a closer association with parks in SEG:ABC plots. In young (under 30) and urban sub-groups, furniture and mattresses appeared to be a category on its own, beyond 'normal' litter and some way towards hazardous items. Fly-tipping in the countryside was flagged as a concern in two of the rural groups.

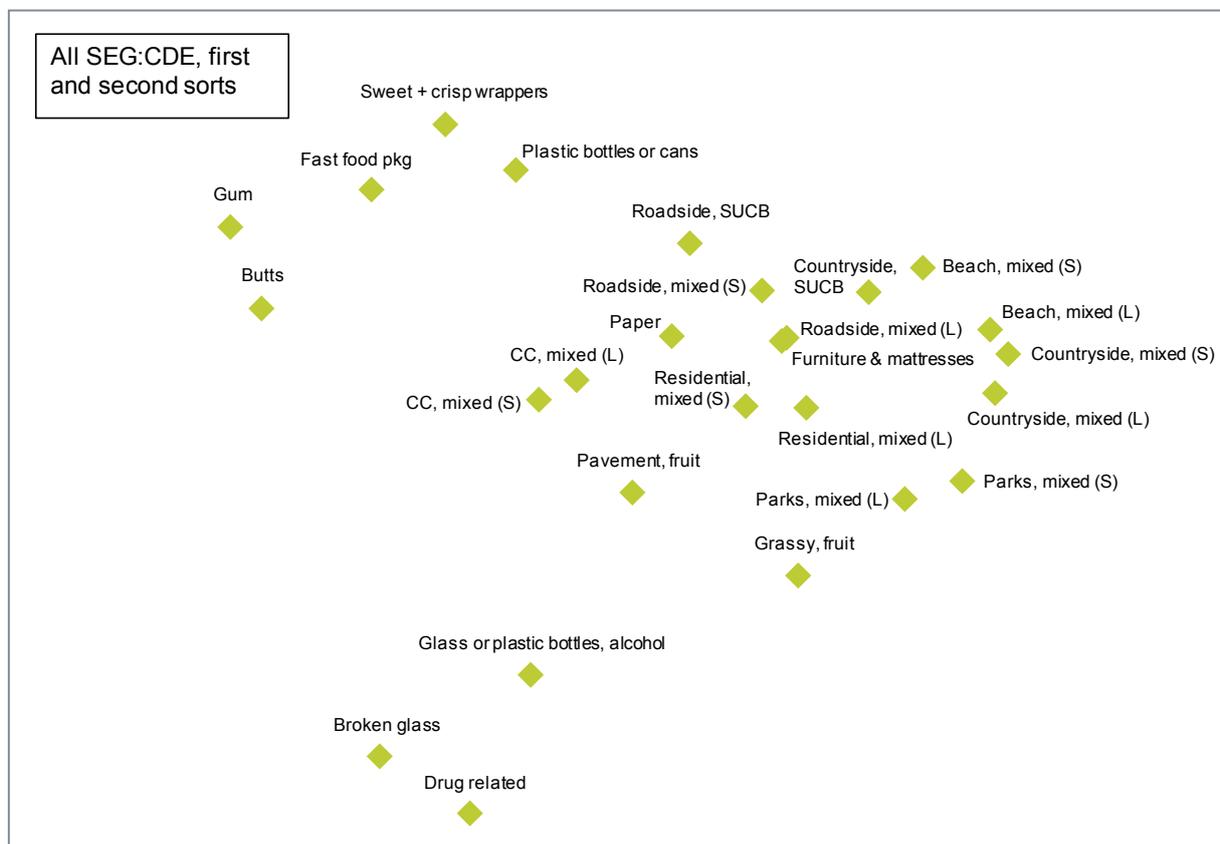


Figure 22 – Multi-scalogram plot of first and second sorts for SEG:CDE

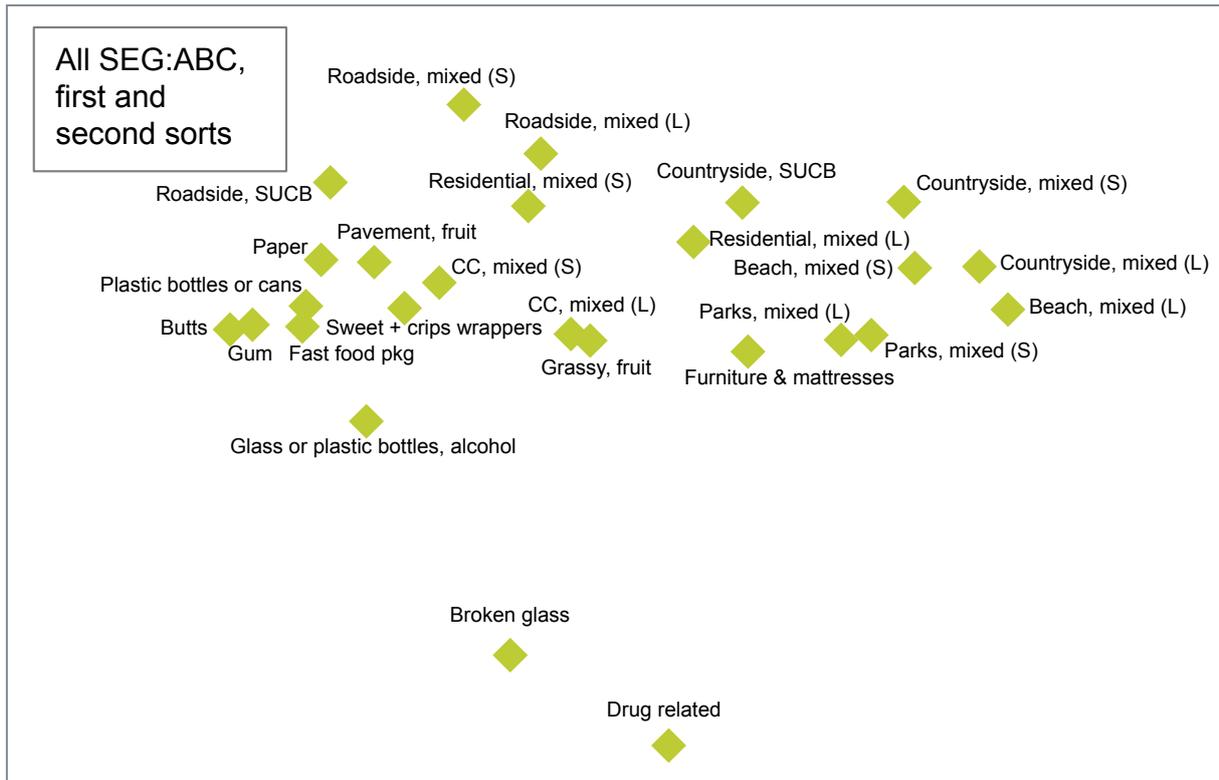


Figure 23 – Multi-scalogram plot of first and second sorts for SEG:ABC

4.3 Place-type-amount interactions – situations of concern

It was difficult to disentangle what was *actually* a concern for participants from what *would be* a concern if it occurred. The picture is heavily clouded by the widespread effectiveness of street cleansing which has removed many litter problems and made them invisible to many of the participants, especially in town centres and residential areas. As noted throughout this report, an experience and expectation that litter will be cleaned up quickly reduces the degree of concern that people have about it. If this were to change for any reason then it is highly likely participants would be more concerned about litter (as reflected in views about roadside litter, where there is uncertainty about cleansing frequency). Concern is therefore much more complex than simply being worried about the amount and type of litter visible on the street.

In this context, there was a sense that anything out of the ordinary would be concerning. Sort exercises, for example, that were conducted on the basis of seriousness, concern or hazardousness, located all descriptions of large amounts of litter, regardless of place, as a distinctly unsatisfactory category – even though it was clear few participants see large amounts in those locations. Concerns about flytipping in residential areas are perhaps similar – most participants find the idea of it happening deeply upsetting but may not encounter it much, while a small number of participants do suffer real disamenity from this problem where they live. Drug-related litter was the most extreme case of fear of the unknown for the majority.

It is possible to deduce from the sorting exercise and discussions that ‘everyday’ litter and things ‘close to home’ are more directly concerning, even though other litter situations may be upsetting and annoying when they are encountered. When participants were asked directly where and what types of litter were most concerning (after the sort exercise but before the photo prompts) dog fouling was inevitably mentioned (see section 3.1) but so was broken glass, and more frequently. Concern here was about broken glass in residential streets and other parts of the local neighbourhood such as parks and places where people go for a walk. Related concerns were general messiness around schools and other places where young people congregate.

Q: Where else does it concern you when you see litter?

W: I think outside your house when you're looking out your window and there's litter and you know if it's coming into your garden and it's nothing to do with you....

Dialogue, Mixed 2

Fast food litter and related seagull problems were mentioned in three locations (two coastal and one rural) when participants were asked directly to say what was most concerning; but, this problem was also brought up in other groups at various other points in the discussion. (see section 3.2.3). Some participants expressed a related concern over the quality of visitor and tourist experiences, which was mentioned in all six of the discussion group locations. While some participants disagreed that tourist needs should make a difference to managing litter problems, others felt very strongly that pride in your home town is an important reason for controlling litter.

More generally, accumulations of 'everyday' litter anywhere were reported to be concerning, especially if it was perceived they would stay there for some time and run the risk of attracting more litter.

A few participants also mentioned littering behaviour, and controlling those who do it, when directly prompted to say what they were concerned about. As noted earlier in the report, many participants expressed annoyance about littering behaviours and there was a sense that quite a few wanted to be reassured that 'the authorities' are addressing this aspect.

Litter situations that generally seemed to be less of a concern involved chewing gum and cigarette butts, especially in city centres (see sections 3.2.1 and 3.2.2), though these were a concern for some participants. As noted in section 3, anything that was considered bio-degradable (including cigarette butts according to some) was generally less concerning, although a few participants had minor worries that fruit debris in city centres could be a slip-hazard.

Finally, as a warning with respect to communicating about litter problems, it is worth noting the nature of responses to two of the photo prompts shown, one which showed a single crisp packet in the countryside weighed down by a stone, and the other near to a city centre where a soft drink container had been wedged off the ground inside the handrail to a short flight of steps.





The specific situations shown – to illustrate small amounts of litter in those locations - often elicited jokey responses and sentiments that whoever had done it was 'clever', which got in the way of participants having a more engaged response to the litter itself. Some participants gave the impression they wouldn't identify those kinds of behaviours as littering – or at least as littering that matters. More meaningful responses to litter in those locations were given when more 'normal' pictures were shown and in conversation during the sort exercises.

5 Priorities for tackling litter

This section describes and discusses participants' views on priorities in the context of the perceptions and attitudes discussed in the previous sections.

Participants' views on how much priority they attach to different litter problems were explored in a number of ways.

- The structured third card sort asked participants to consider which problems are most of a problem for 'authorities' to tackle, grouping issues from high to low, in as many groups as they liked, as before.
- Priorities were probed further in the final plenary discussion, ending with each person's suggestion for their own single, top priority.
- An open-ended question was included at the end of the post-task survey for participants to offer their top 3 suggested priorities.

Taken together, these three sources provide rich insight which allows for the nuances in the ways participants responded to specific litter situations and the personal dynamics in their group.

5.1 Participants' priorities identified from the structured card sort

Findings from the card sort need to be set in the context of participants' everyday experiences of litter (see section 2) which tend to shape their expectations about what is 'normal' or tolerable or needs changing.

In brief, it appeared that they tend not to see much litter in the course of daily life, except slightly larger quantities in urban centres and lay-bys, and any litter they do see they expect to be cleaned up quickly. The current litter situation in residential areas is largely considered to be satisfactory, although a minority do experience disamenity from litter and flytipping problems.

In addition, the increase in litter awareness reported in the post-task survey suggests that litter is largely 'in the background' as a public amenity issue, thanks in large part to the efforts of authorities to manage the problem and meet expectations (which was acknowledged in some of the discussions), but also possibly the extent to which it is normalised, and people have become immune to noticing it.

It was apparent that participants formulated their thoughts on priorities very much within a narrow framework of their own, current, experience; and they tended to make an assumption that nothing significant about that situation would change (e.g. frequency of cleaning, littering trends and so on). It was also clear the public have limited knowledge and understanding of the challenges facing amenity managers and policy makers in the litter arena - including maintenance of the status quo - so that they do not have a sound platform for generalising beyond their own experience or weighing up the value of different priorities for action. Of course, there is no reason why the public should have this knowledge or depth of understanding but it underlines a need to consider what the public identifies as priorities alongside other evidence.

As well as the results of the sorts themselves, the approach that participants took to sorting revealed some useful insights into how they perceive 'priority', within the confines of the litter situations presented to them.

- Hazard was a common, and often the first, line of approach for categorising priorities, especially (but not only) in the female groups. It is likely that these responses were primed by the inclusion of drug equipment and broken glass as sort items which, as noted earlier in the report, tend to elicit visceral reactions.
 - At the 'low priority' end of the spectrum another consistent criterion for sorting priorities was whether something is considered biodegradable; these groups tended to start with apple cores and banana skins.
-

- Other criteria were applied when discussing where to place individual cards. Sometimes participants wondered whether things that should be an individual's own responsibility should be a lower priority, as compared to 'big problems' (e.g. flytipping) that only the council could tackle. Others made decisions according to the kind of place they live in, whether rural or more urban, and how litter impacts are experienced in those different places.
- A few participants suggested to the rest of their group that their impressions of costs or value for money of different situations should be used as a criterion to select priorities. Since many participants do not have any real knowledge about those aspects 'cost' was sometimes proxied by the hypothetical idea of 'if the council couldn't do all of it' – but no-one expected this to be something that would happen in reality and a number of participants objected to the idea in principle.

The conversations during the sorts also revealed a considerable amount of disagreement about priorities. This included debates about which areas matter most – invariably residential versus city centres, but also roadsides and countryside. As noted in section 4, some people wanted to prioritise clean city centres for tourists and others their own backyard. There were common debates about the 'harm' caused by chewing gum and cigarette butts (less so in the older groups) and little consensus. Whether or not such litter is avoidable sometimes came into the decision-making process.

On the other hand, there was almost always consensus about furniture and mattresses (the proxy for flytipping used on the sort cards), which was frequently categorised as a high priority early on in the sorting process. Similarly, there was usually consensus about fast food packaging and associated plastic bottles and cans (high-ish or middling priority) and, as mentioned above, a low priority for fruit debris, and sometimes other biodegradable (or perceived to be) items (e.g. paper but occasionally also chewing gum and cigarette butts). The following dialogue captures the essence of the conversation in several of the groups.

M: The most headache and obvious (category)

M: Aye litter in the public eye, the most busy places. That's away from tourist areas and things like that. The beach, parks and recreation, city centre kind of more so than just residential streets where you'd be walking about. If it's a large amount on a residential street because that's going to be the same as furniture and that. That's going to be a major concern on the street more so than smaller amounts in the street I guess.

Q: OK then next category is somewhere in the middle?

M: It's kind of the everyday stuff that always happens. It doesn't matter, clean it up it will come back again kind of thing. It would be nice for it not to be there, they clear up cigarette butts in the morning sure enough they'll be there by the afternoon again, I think, that attitude.

Q1: OK and then finally you've got a low priority group here. Why are those things not so important to you guys?

M: Because not as many people see them it doesn't affect as many people.

M: It's stuff that in ideal world... but if you're having to forgo something I'd rather see bags of rubbish on the side of the A9 than in the middle of John Square or something.

Dialogue Mixed 2, men, sort #3

Figure 24 – Dialogue illustrating how participants considered priorities

As in the previous sorts, the results were used to create a spatial plot to show similarities and differences in the way participants had grouped priorities. In this case, the results were also turned into a score so that an indicative ranking of priorities could be created. To generate a scale, each card in the group of cards which were considered to be the highest priority for authorities to tackle scored

'10', and the lowest priority group of cards scored '0'. The total scores were added up for each card, and the results plotted in order to give an indication of the overall priority for each item. Results from 23 correctly carried out sorts were included in the results. The ranking needs to be strongly caveated in that the scores are not a robust or precise statistical measure of differences in priority between items; it should be viewed more as a guide to the broad distribution of perceived priorities. It is important that the scalogram plot and indicative ranking graph are interpreted together (Figures 21 and 22).

Drawing from the transcripts as well as the numerical results from the sorts, it is possible to distinguish five broad categories and the perceptions that tend to be related to them. Because this is a qualitative methodology, the boundaries between the categories are indicative and interpretative rather than statistical; boundaries shown by dotted lines are less clear cut than the others. The five broad categories from the plot have been mapped on the ranking graph (Figure 25) to aid interpretation of how the rankings came about. The five categories are:

- **Hazards:** these are perceived to be the highest priority because they are dangerous and frightening, as outlined earlier in the report.
- **Large amounts and priority items:** a hybrid category which reflects participants' concerns about how they would feel if they were to experience a 'large amount'¹ of litter – in any location - with perceptions about the most problematic items that could be implicated in large amounts. While a wide variety of locations were grouped together here, participants were usually responding to the idea of 'large amount' first and the location a much less important second.. This explains why residential areas and flytipping are included here – not because they are currently a problem for most but because they *would be* a significant nuisance and high priority if participants were to experience them. Large amounts are also associated with city centre litter involving eating-related items - fast food packaging and drink containers. This type of litter – along with hazards – was also often associated with beaches, as a priority that participants want authorities to keep in mind.² Large amounts in countryside and on roadsides tended to be prioritised lower than in city centres and residential areas, although participants from rural areas tended to rate countryside a higher priority.
- **Intermediate, lesser evils:** this is a category of mainly items rather than places, which participants would generally like to see cleaned up but, if they had to choose, would be a lower priority than higher nuisance items or residential areas or town centres. It most likely also reflects the influence of some participants who probably litter these kinds of items on the basis they are 'small bits' and considered more acceptable to drop, including chewing gum, cigarette butts and sweet/crisp wrappers (see sections 2 and 3).
- **Small amounts, almost tolerable:** small amounts occurring anywhere were often conceded as a lower priority although, ideally, participants would want to see none anywhere, and especially not close to home. Paper scraps and, sometimes, chewing gum tended to be considered in this way – sometimes, it was suggested, because these items and small amounts are not visually intrusive.
- **Not a priority, biodegradable:** as described in sections 3 and 4, fruit debris is typically perceived as 'not litter', not harmful, nor socially unacceptable.

NB Since this is a qualitative methodology, the ranking needs to be strongly caveated: it should be viewed only as a guide to the broad distribution of perceived priorities rather than a robust statistical measure of differences in priority between items.

1 This was deliberately not defined as an absolute amount so that participants could react to what would feel like a large amount for them.

2 Though it needs to be noted that four of the groups were held in coastal locations – Ayr and Aberdeen – so this may have influenced how high this situation was ranked overall.

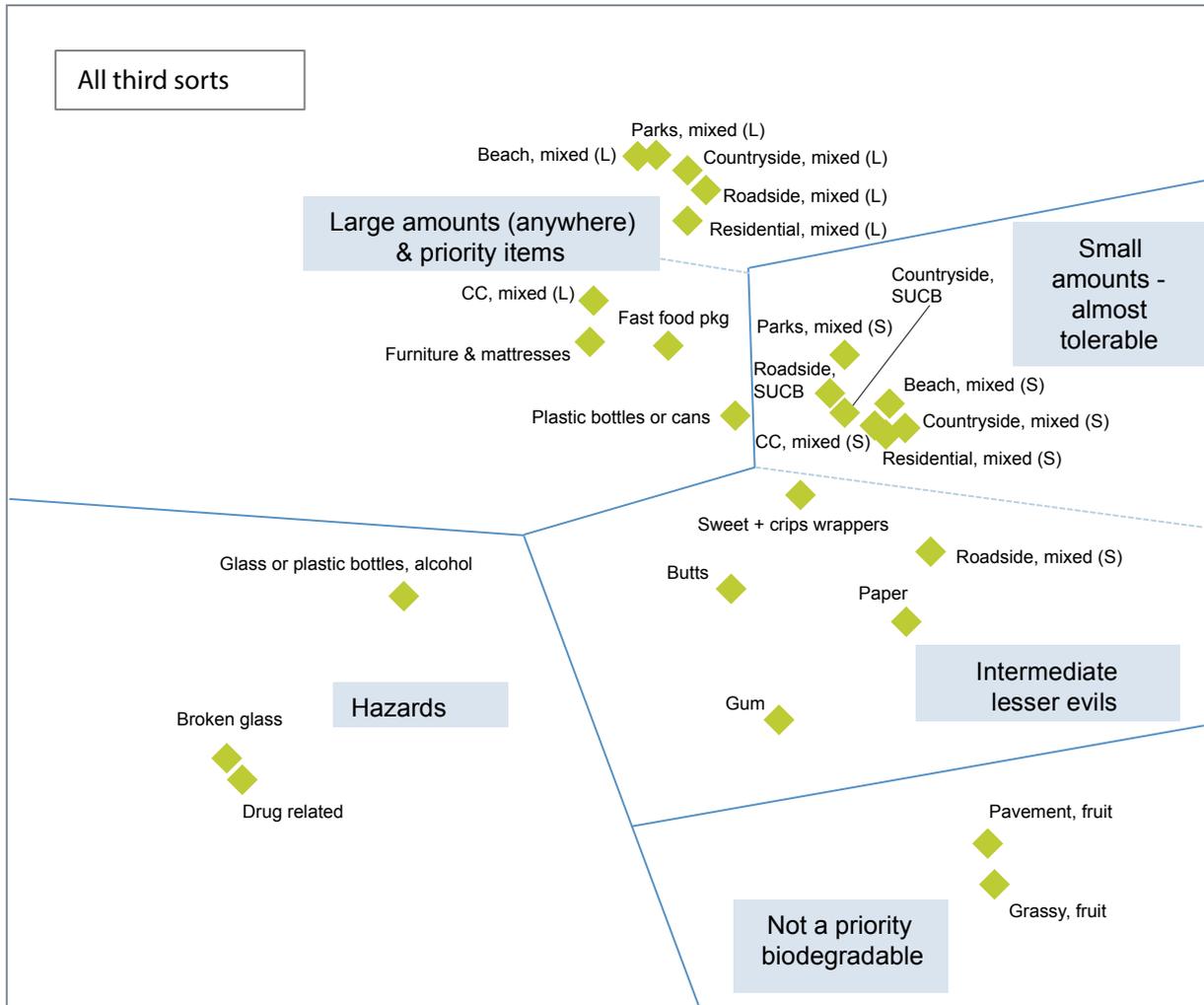


Figure 25 – Scalogram for all third sorts³

³ Abbreviations are used in the plots: CC= city centre; L = large amount; S = small amount; SUCB = single use carrier bag; mixed = mixed litter of unspecified types

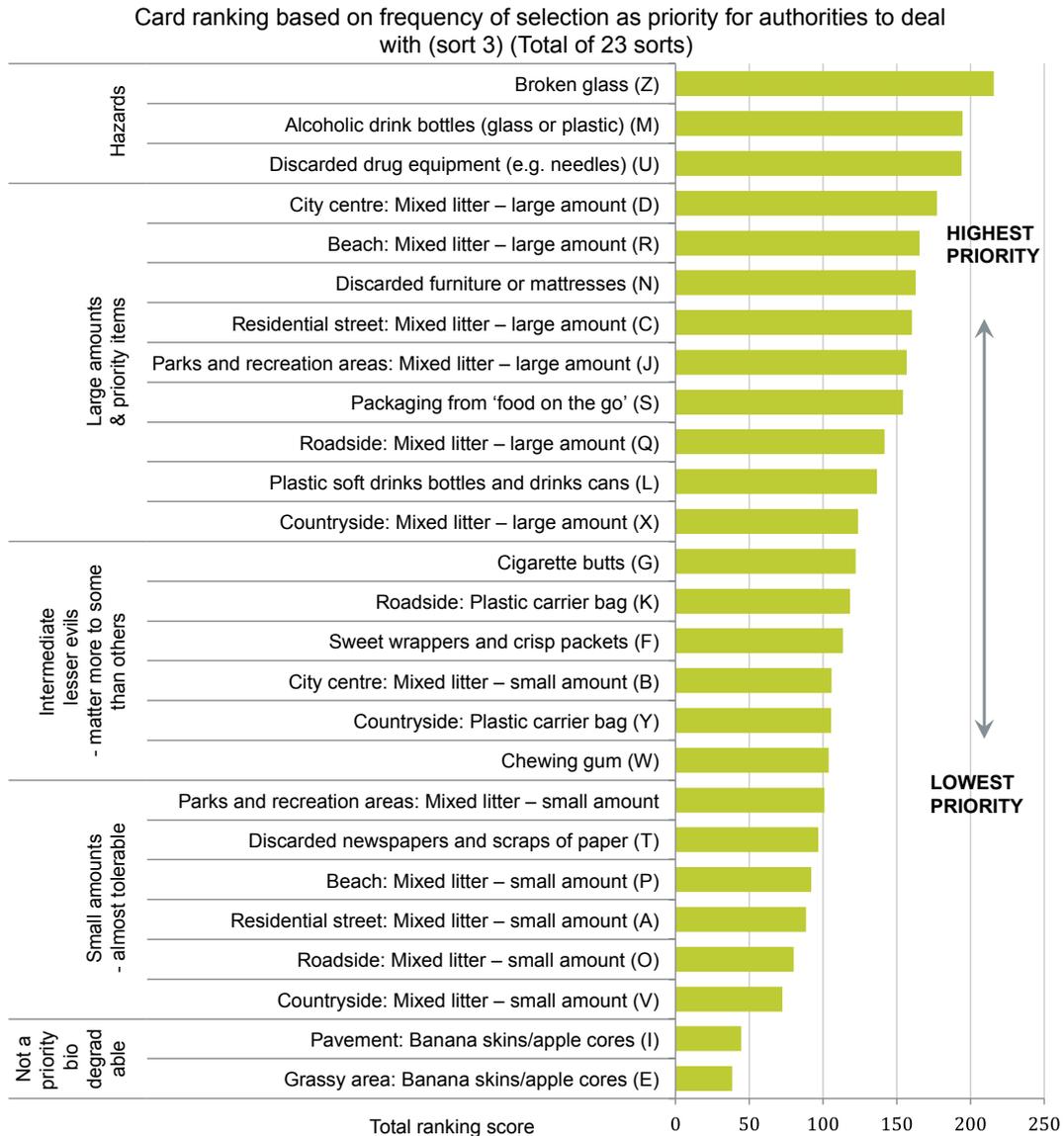


Figure 26 – Participants’ ranking of priorities of litter situations prompted in third sorts

5.2 Further insight on priorities from the discussions

The third sorts crystallised the impression from the rest of the discussion that a majority of participants thought that all litter is a problem, which should be cleaned up wherever and whenever it occurs. This impression needs to be qualified by the proviso made in section 2 that litter did not appear to be an especially front of mind issue for participants. They care, but perhaps more so when littering is brought to their attention.

If they turned round and said they can't do any of these things, it makes you want to do them all! So in terms of priority you would put them all in one big massive group.

Man, Mixed 3

W: I don't think it should be categorised, I think they should pick it all up.

M: Yes.

Dialogue, Rural 2, during sort#3

There are certain aspects of 'dealing' with litter which it seems participants need to feel comfortable about at a sub-conscious level. This includes a sense that litter will not occur where they live (either

because of the people who live there taking care of their area and/or effective council cleansing), it will be cleaned up frequently in other places they visit regularly (preferably daily) and – for some participants at least – those who litter and the anti-social behaviours that cause littering are being confronted. Not everyone could be described as feeling that way but those with different views appeared to be in the minority.

It was also very evident that people's priorities for tackling litter are very personal. When participants were asked to volunteer their own personal suggestions at the end of each group there was consensus in only one group about the top priority. A range of personal preferences was expressed in every other group and there did not seem to be any consistent differences between age or social class groups. Priorities that were often mentioned included fast food packaging and seagulls, city centres (daytime, and night-time where there was a large evening economy), dog fouling, flytipping, hazardous litter and behaviour/education. Some just wanted more bins.

Mine would probably be the city centre after nights out. The glass and the spew and the wrappers, that bothers me, blood.

Woman, Urban 2

Some priorities also reflected particular local issues. Seagulls and related fast food litter problems were highlighted in the coastal locations. Flytipping was a big concern in one particular rural group where participants reported a particularly bad (in their view) local 'hotspot'. Some priorities could even be described as hyper-local: specific streets where drug-related litter accumulates, shared bin areas in some estates and flatted areas, specific named parks, or roadside and countryside 'hotspots'. What does appear to be the case is that people can identify hotspots on a local basis; this could be used to focus localised interventions. Local places where people walk for recreation (including by burns and rivers) were once again flagged as areas that need to be looked after and, a few suggested, may not get the attention they deserve.

I would like to see more street cleaners, and not just for the streets but for the public walkways, walkways that go alongside the burns and the rivers. For most street cleaners that do a tour of the village and cover all the streets and public walkways, get to clean them as much as possible, then it makes it more pleasant for locals.

Man, Mixed 4

5.3 Participant priorities identified in the post-task survey

Following the discussion groups, participants were given one last opportunity to offer suggestions on their top three priorities for tackling litter problems, taking into account what they had heard and considered in the groups. It is important to remember here that the responses are specific to this particular group of participants and cannot be viewed as representative of the Scottish population as a whole. The primary point of the exercise was to sense-check what was heard in the groups and give those who hadn't had a chance in the groups to fully express their suggestions for priorities another opportunity to do so.

When participants were given an opportunity to provide further unprompted suggestions for priorities in the post-task survey, litter types were mentioned much more often than places (Figure 27). The locations that seem to matter most are similar to those identified through the sort exercises: parks, residential areas, city centres and beaches (recognising that four of the groups were in seaside locations).

Dog fouling once again was clearly identified as being in the same category as litter, being mentioned most often as a top-3 issue, and once again reflecting its ranking as the most problematic litter type in residential areas. Reflecting participants' perceptions of hazardous litter, drug equipment and glass also both ranked highly. Given the apparent priming effect of the pre-task and discussion exercises on these items, it would be worth considering in any future survey work whether questions about problems and priorities could be asked in an unprompted way. Eating-related and fast-food litter was

once again confirmed as the highest priority item of the 'everyday' litter types (suggested by over 1 in 4), while cigarette butts and chewing gum were a priority for just over 1 in 10 of the respondents.

The other dimension captured in this exercise was the desire of some for tackling littering behaviours to be a priority, by supporting correct disposal (bins) and/or behavioural measures (fines). This was reflected in nearly 1 in 3 making a suggestion relating to litter bins – more of them and/or more frequent emptying – and 1 in 10 wanting to see fines being used to deter litterers. Some (1 in 10) also wanted action on their domestic refuse and recycling service in order to prevent litter problems.

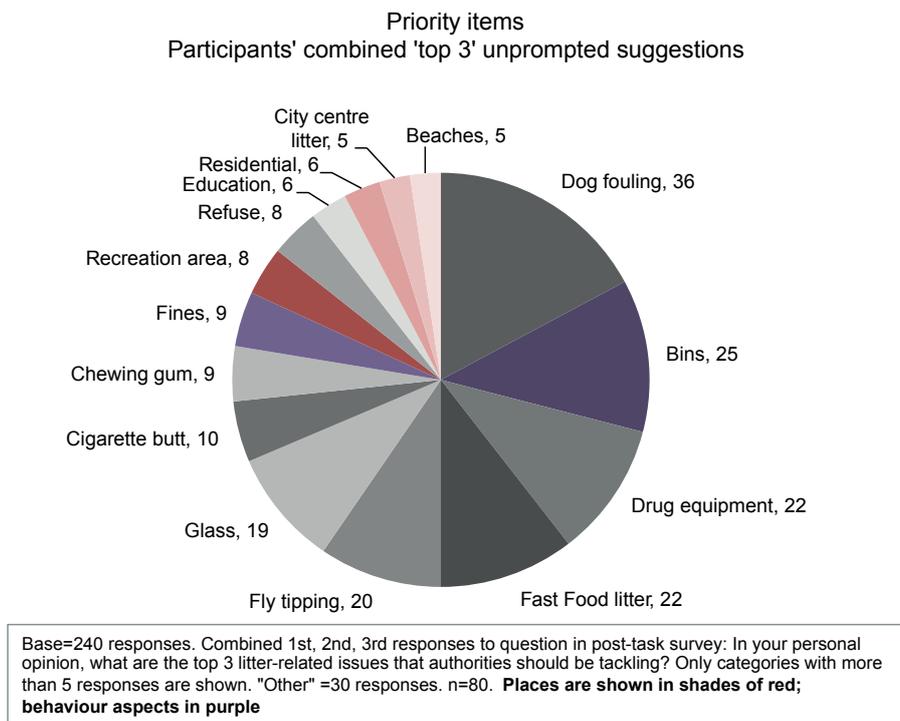


Figure 27 – Unprompted suggestions of priorities for tackling litter, post-task survey, n=80

5.4 Participant suggestions for action

Suggestions for action were not a specific focus of the research but they were offered in passing by participants throughout the groups, particularly during the discussion on priorities. The main aspects that were raised are reported below but they should not be seen as a fully explored set of perceptions.

Bins

Bins were a frequent topic of conversation across the groups. Opinion seemed to be divided between those who thought that more bins, and more frequent emptying, was a key part of solving the litter problem and those who thought that litter was a mainly behavioural problem which no number of bins would solve. It could be surmised that this split in attitudes about bins was reflecting differences in attitudes between 'guilty' or 'accidental' litterers and those who would never drop litter (see section 2).

Having more resources to make it easier to dispose of your rubbish without having to go to the end of the world sort of thing, a bit more like more bins....but making it easier for people so that they don't think I'll just drop it, that becomes more awkward than actually disposing of it, so finding a scheme to do that.

Man, Rural 1

... I think for as much you can increase the number of bins, you could have a bin on every lamp pole 500 metres, if you're in the mindset that it's OK just to toss it to the side rather than walk to the bin then it doesn't make any difference how many bins are there.

Man, Mixed 2

For some participants, it was more specifically about having the right number of bins, in the right places, emptied at the right times: riverside and countryside walks, beaches and areas around schools were all mentioned in this regard. One person even suggested that beaches should have temporary extra bins in the summer which would mean they didn't have to be managed all year round. The idea of more dog mess bins was popular, sometimes to reduce the distance people have to carry poo bags; some participants noted that the bags have become a litter problem in their own right.

...The perfect example school children right, they may or may not know that littering is bad I'm assuming that most of them do, but every single one that walks back from Sainsbury's or to their school which is 500 yards, one in three drops a Sainsbury's packet or whatever. And I think it's because there's lack of bins. If there was just bins everywhere people would use them, it would be harder not to use a bin.

Man, Urban 1

As noted above, a minority of participants also noted litter problems allegedly arising from domestic bins, where these had fallen over or where lids were not properly closed. There was a hint that councils were being blamed here for imposing particular requirements or restrictions on households, but it appeared to be a minority complaint. It may have been one of the 'hyper-local' problems referred to above, on particular streets where there are concentrations of households who are not using refuse containers as intended.

Behaviour

Both those who thought that providing more bins is not the solution and others (including some self-admitted litterers) supported measures to address behaviours, either through education or more punitive measures.

I think the onus has to switch on the people rather than the Council. Is it really the Council's job to clean up other people's mess? If people as you said take a little bit more pride in the area that they live or the shops or the beach then there wouldn't be this let's just get the Council to do it. If you see what I mean? How you educate that I don't know because people [in this group] have been saying that the children are educated in school but then if the parents don't do it there comes a point where if my mum and dad are doing it then I'll just do it too.

Woman, Mixed 2

Taking responsibility for correct disposal of your own 'litter' (waste arising while out and about) was a strong theme in these particular discussions, alongside strongly judgemental attitudes (from some) about the mindsets and social outlook of those who would consider littering. A few of the most outraged participants, it seemed, see littering behaviour as symptomatic of a wider social malaise that needs attention and who may not be impressed by 'soft' (e.g. educational) measures to tackle the problem. However, that did not seem to be the general view among participants.

There was widespread support (even from some young people who admitted to littering) that people need to be encouraged to take pride in where they live and keep their own residential areas clean and tidy. For litter elsewhere, there was a desire for litterers to be 'educated', 'taught' or 'told' that it is not acceptable and, some people said, introduced to the old-fashioned idea that you put litter in your pocket or you take it home wherever you can't find a bin. Considerable blame was directed at the types of people who participants tend to believe are responsible - school children, youths who hang about in parks and car parks, and irresponsible parents who set a bad example to their children. One man offered a more moderate suggestion that litterers need to be educated not only that it is wrong but also about the impact that the litter itself has.

I think telling people not to do it in the first place should be the priority. The people that are littering shouldn't be doing it so these fines should be enforced more, there should be people out, you should be seeing people getting fines for doing that and then that will make everyone stop doing it eventually. But I don't think it should be acceptable, I don't think the authorities should be saying well we'll go round and clean up after you because you can't put something in the bin. I think people should take responsibility and put it in the bin.

Woman, Mixed 5

Fines were often raised by one participant then taken up by others for discussion. Conversations about fines sometimes followed on from discussions about a need for more bins; and conversations may then have ranged across topics such as the pros and cons of street wardens, education or community service. Some people had been fined or knew others who had and reported this may have influenced their behaviour, though it may have made them more cautious rather than preventing them dropping litter entirely. There were a very small number of people who had particularly strong views about punishing litterers, who also thought that individuals sentenced to community service should be made to pick litter. While those who thought fines are a good idea were often very vocal, the post-task survey suggests they were not in the majority. Following a vigorous exchange of views on fines in one of the groups, a show of hands revealed a more or less even split of participants for and against, which is probably a fairer reflection of participants' views more widely.

I think an 18 stone warden who can apply the laws that are there now. We don't need any more laws, apply the laws, it's a £60 fine for every piece of litter dropped and get a big fellah to do it and I'll pay his wage.

Man, Rural 1

The amount of people that get community service these days you think there would be like an army of people that you could use them for benefit.

Man, Urban 2

Producer responsibility

There were also a very small number of participants who introduced the idea that companies selling the littered items should have some responsibility for clearing them up or preventing them. These comments were always related to eating-related litter, not only fast food cartons but also litter originating from bakers, sandwich shops and anywhere that sells snack food, including supermarkets. A few participants also referred positively to money back (deposit return) schemes recalling either their childhood or other countries.

6 Discussion and Conclusions

This section draws together the leading insights from the research. The views offered by participants in the 12 discussion groups have been consolidated and interpreted to provide general conclusions about the nature of public perceptions and concerns around litter.

6.1 Public perceptions of litter problems and related attitudes

The overriding impression from the research is that litter is not a significant daily concern for most people, largely because it is managed effectively so that people do not feel they have to worry about it. Equally, there is a general expectation by the public that residential neighbourhoods should always be clean, with no or minimal litter; and litter is only tolerated in other places which people visit frequently if they can expect that litter will be cleaned up quickly.

Some people can become very animated, emotional and annoyed when litter and littering is brought to their attention directly, which was especially evident when research participants were shown photos. What happened in the groups also showed that concerns about some items (in this case, drug-related litter) can be blown out of proportion by bringing the topic to the front of people's minds – which is a risk worth flagging with respect to communications; an undue focus on certain items may mean the audience lose interest in the more generalised aspects of the message. Participation in the research tended to increase participants' awareness of litter, often leading people to see more of it around them, though some said they saw less than they initially expected.

The research confirmed that more people are litterers than are prepared to admit to it in public because of the strength of the social norm about it being an anti-social behaviour. Very few people see themselves as deliberate litterers – who are widely condemned as being the worst kind – while there are grey areas of acceptability around littering where it is felt to be 'accidental' (small pieces, when I'm not paying attention, when I'm drunk) and 'unavoidable' (lack of bins, full bins, inconvenient bins, or no immediate opportunity for proper disposal). Perceptions of problems and priorities are inevitably influenced by where people sit on this scale of sympathy for littering – from totally harmless and accidental to deliberate and anti-social. For some people all littering is completely unacceptable; for others it is less clear-cut. It is possible that some people would easily be alienated if what they feel is minor and accidental is presented to them as deliberate and irresponsible, which they may agree is appalling but associate with fewer litter situations than those who do not litter.

6.2 Locations

Residential

Litter was rarely a problem in residential areas for those who took part in the research. People are generally happy with the cleanliness of their own street. There was often a feeling that any litter in these areas was temporary – caused by wind, seagulls, or bin emptying processes; and also that if it were only a few items residents themselves should take responsibility and pick them up. Only a few people who lived near the city centre, in some flatted areas or estates, or on particular walking routes had issues, and these *were* a regular cause of irritation. Flytipping in residential areas causes significant unhappiness wherever it occurs. Dog fouling is consistently highlighted as something that people want tackled in residential areas, either by the culprits or by councils cleaning it up.

City centre

Despite the city centre being the place where people see the most litter, there was an acknowledgement that this was cleaned on a daily basis. Daytime levels were usually felt to be acceptable (including, often, tolerance of chewing gum and, sometimes, cigarette butts) and it was

late at night (particularly Saturday nights) when litter consistently reached unacceptable levels – and then, only for a few hours. Consistent ‘low’ levels of litter do not generally register as issues. While people know that a lot of litter arises in city centres – often from eating-related cartons, wrappers and uneaten contents – they are generally not very worried because it is expected to be a temporary situation. The menace of seagulls or other vermin associated with food-related litter does annoy and worry some people. If town and city centres were cleaned less often or thoroughly it is likely this would become a significant concern for the public. ‘Inter-zones’ between town centres and residential areas, and through roads, were also identified as a concern by some people, with some people having the perception that they received less cleansing attention.

Places that are used regularly for recreation

An important aspect of ‘somewhere nice to live’ tends to include not only your own street but also somewhere close by for walking or being outdoors. The public want to know that their local parks, riverside and other walks, and beaches will be clean, including free from dog fouling and hazardous items that could cause injury, especially to children or dogs.

Views about the disamenity of litter in the countryside vary according to where people live. Those who live in towns and cities tend to rate cleanliness of their local recreational areas a higher priority than those who live in rural areas. To some extent, countryside litter is out of sight and out of mind for urban dwellers while it is a stronger concern for those who live in rural areas, especially in places where they walk regularly.

Places associated with young people socialising, eating and drinking

These places are strongly associated with litter problems in the minds of the public. The wider evidence does indicate that littering is more prevalent in younger age groups, though in contrast to the focus groups, the wider evidence base suggests this group is not as exceptional as some participants seem to believe, and shows that all demographic segments are liable to litter to a greater or lesser extent.¹ Perceived issues tend to relate to specific streets (e.g. between schools and shops), parks, or places where younger people sit in their cars to eat, drink or socialise, perhaps because they have nowhere else to meet as a group. This may include car parks and retail parks as well as recreation areas. A commonly held narrative and belief is that young children learn about litter prevention at primary school; secondary school students then either forget or stop making an effort to find bins; and older teenagers and young adults are largely responsible for fast food waste and alcohol bottles/broken glass. Any role for ‘ordinary’ adults in creating everyday, eating-related litter is rarely considered. The findings here are important for two reasons: first with respect to flagging an opportunity to focus prevention activity on a ‘behaviour-in-place’ which acknowledges the social context as well as the litter that arises from it²; and secondly with respect to wider communications, to debunk the idea that litter is only, or principally, the fault of younger people. In particular, it is possible that blaming another demographic group means people can distance themselves from the behaviour in question, which, if it is occurring, would make self-reflection, and resulting behaviour change, less likely.

Hyper-local problems

Participants always knew where to look for litter and mentions were made of local ‘hot spots’. Rather than identifying priorities for broad categories of place or items, some people have very specific local concerns about ‘problem’ locations which are only identifiable at the very local or neighbourhood level by the people who live and use those places. These places might include, for example, specific streets between schools and town centres, car parks associated with fast food, back alleys and out of

¹ Zero Waste Scotland, Rapid Evidence Review of Littering Behaviour and Anti-Litter Policies <http://www.zerowastescotland.org.uk/sites/files/zws/Rapid%20Evidence%20Review%20of%20Littering%20Behaviour%20and%20Anti-Litter%20Policies.pdf>

² Ibid

the way places that attract drug users or flytipping, streets where people do not use their household bins as intended, specific parks or local walks. In towns and cities it might also include the spaces immediately outside pubs, clubs, offices etc. – generally places where people congregate to smoke or eat on the go.

Within the scope of local authorities or not

When people think about litter they think about the local council - participants spoke almost entirely about councils clearing up litter and never about commercial and private landowners (beyond individual homeowners, where it is generally expected they should keep their own space and nearby pavement free of litter). This is despite participants' concerns about situations where litter is expected to accumulate over time and not be cleared up.

Places of concern that might fall outside the local authority remit include odd 'corners' in town centres, privately operated car parks, derelict city sites, or hard to access areas of vegetation or riverbanks. There was some doubt about who had responsibility for clearing up roadside or countryside litter which fuelled impressions that litter could stay there for some time and, likely, attract more. Notably, this impression did not necessarily translate into roadside and countryside locations being considered a high priority except by some rural residents who are more often exposed to this type of litter by virtue of where they live (see Section 3).. Some people at least think that businesses that sell food or drink to consume on the go should make a contribution to solving litter problems.

6.3 Types

The most frequently identified city/pavement litter types are chewing gum and cigarette butts. These bother some people, but many do not really notice them, and several people mentioned they had become 'immune' to this type of litter.

Fast food packaging and leftover food waste tends to cause more concern – including its links to seagulls and the knock-on problems for environmental quality that result (strewing litter across wide areas and damage to buildings or cars from droppings). Food related litter is a problem everywhere, however, not just in city centres. Car parks and roadside locations are often identified with this packaging/waste; and the idea of people deliberately dumping such litter out of car doors or windows, on the move or in car parks, is upsetting for many – even if they are not directly inconvenienced.

Fast food packaging is part of a broader category which people identify as 'everyday' litter, which also includes drink cans and bottles, crisp and sweet wrappers, and scraps of paper. Some people consider cigarette butts and chewing gum to be part of this category while others locate butts and gum separately because these are felt to be less worrying or excusable bits of litter. This category is seen as litter that needs constant attention.

Some hazardous items evoke strong emotional reactions because they cause fear and were always rated as a high priority in the group discussions. Sometimes this is fear based on experience – of broken glass in local places used for recreation – or on perceptions of threat to life (discarded needles). Again broken glass was associated with young (or underage) drinking, and was a particular concern in places like beaches and parks where children might play. Tackling broken glass may be noticed – some people said it was less of a problem now than previously – but drug equipment is rarely so: while drug litter is often stated as a priority, specific efforts to tackle this kind of litter are unlikely to have any impact on overall satisfaction.

Dog fouling is invariably thought to be the same problem as litter – caused, it is felt, by uncaring and irresponsible people and something that spoils personal enjoyment of the local neighbourhood. Residential streets (especially in cities), parks, grassland and areas for local walks are all places where people do not want to encounter this kind of litter. Bagged, but littered, dog poo is also perceived to be a littering problem that needs to be tackled, through providing more bins or addressing behaviour.

Flytipping is also a common concern because of its anticipated impact on the visual state of the local neighbourhood and the risk of attracting other problems – vandalism, vermin or more litter. While everyone associates flytipping with large household items or large accumulations of dumped household rubbish, some people consider that any bagged domestic rubbish which is not disposed of in owners' household bins should be considered flytipping. Charging for council bulky waste collections is widely blamed as a cause of flytipping, and an understandable excuse for some people. Understanding of such services is poor.

6.4 Amounts and improvement

It proved difficult to establish what people perceive to be 'a lot' of litter and what would be recognised as an improvement. The language of 'amount' is not engaging or meaningful at all. People struggle to describe what they see in terms of quantity or to differentiate between 'better' or 'worse' situations on the basis of amount on its own. Instead, responses to amounts of litter are heavily dependent on the context in which the litter is experienced and on the narrative people attach to why it arose and what will happen next. In turn, these kinds of account underpin whether litter is felt to be a problem and the strength of negative feelings people have about it.

The situation is heavily clouded by people's knowledge and expectations about regular cleaning. 'A lot' would be any more than a minimal amount in residential areas; and elsewhere any accumulation that was expected to stay there for any amount of time (which for many people could mean longer than overnight). Small amounts of hazardous or unpleasant items, especially in recreational locations used regularly, would also be considered 'a lot'. This includes beaches.

Participants were largely unable to describe what an improvement from the current situation would look or feel like. This is to some extent an outcome of the widespread experience and perception that the places they frequent are generally clean or well managed – though a minority of younger/urban residents do experience considerable local dis-amenity from litter and dog fouling. Dealing with locally specific issues, close to residential areas, would provide some satisfaction. But many people appear just to need a continuing reassurance that litter problems are under control. They sometimes judge this by seeing cleaners on the street, the number of bins and how full they are over time. Some people further want to know that littering behaviours are being dealt with, either through education or punitive deterrents.

6.5 Priorities

As many people are not regularly upset or irritated by litter, it is very difficult to consider or access how much happier they would be if it were cleared up. The box below provides a summary of the 'events' and 'occasions' that people tend to find most upsetting, which underpin the way they identify priorities for action.

Litter is concerning when it is...
<ul style="list-style-type: none"> • On my doorstep • Unexpected (for that place, time of day, or occasion) • Hazardous or frightening • A large item or accumulation in one place • Expected to accumulate over time • Hangs around (not cleaned up quickly) • Spoils my enjoyment of my recreation and leisure time • Deliberate – as opposed to accidental (small bits) or unavoidable (no bins) • Harming my pride in the place where I live • Having a negative impact on visitors, either tourists or family and friends

It was clear, however, that priorities are very personal and contextual, depending on where people live, what they see around them, where they sit on the spectrum of littering being considered acceptable, and so on. In that context, asking the public to prioritise their concerns could be considered to be slightly artificial and misleading because there appears to be little consensus. Drawing from all the research evidence, not only what participants directly suggested as priorities, it would be possible to suggest that there are some aspects where attention could be welcome:

- The quality of pavements, recreation spaces (not just parks) and local walks in residential neighbourhoods (including the immediate countryside in rural areas and riverside walks in towns); tackling the causes of dog fouling and broken glass in these areas
 - Preventing flytipping in residential and nearby areas, including consideration of how bulky waste collections and household refuse services might be contributing to problem behaviours, and related education/communication that might be needed
 - Tackling everyday, continuous litter - the causes and impact of eating-related littering, not only from hot food but any litter arising from food/drink on the go, from both pedestrians and drivers. Related issues would be:
 - Issues in city centre night-time economies, including behaviours as well as cleansing
 - Litter originating from drivers eating on the go, tackling behaviours that lead to dumping in car parks, lay-bys and out of car windows while driving; bringing nuisance and hazards of this kind of littering to people's attention
 - Exploring how to tackle specific locations in the public realm outside local authority control where litter accumulates (e.g. hospitals or other public buildings, orphan and derelict sites, private land where 'corners' accumulate wind-blown or passing litter)
 - Dealing with hazardous items, both prevention as well as cleansing, especially in areas used for recreation (beaches, parks and other local recreational areas)
 - Enabling residents to identify and report local and hyper-local priorities
-

7.1 Methodology

It was agreed that qualitative research would be the most productive way to explore these issues and generate the breadth and depth of insight required. Recognising that litter can often be an emotive topic, a qualitative approach would enable the research to disentangle perceptions of the actual amounts and types of litter from other attitudinal factors which influence people's first responses, including how and why they find it annoying. For example, something might be described as 'a lot' of litter not because it is a large physical quantity but because of feelings about why it is a nuisance in that place. Furthermore, it would be useful for Scottish Government and Zero Waste Scotland to have a good understanding of such nuances before considering survey approaches for measuring public perceptions, or how public reporting of the problem might be facilitated in future.

The chosen approach was to hold 12 discussion groups, each with 10 participants, in six different locations across Scotland, supported by pre-task and post-task surveys completed by group attendees. A pilot group was held to test the effectiveness of the topic guide and stimulus material and small changes made in response.

7.1.1 Participant selection and characteristics

A sample structure was devised by Brook Lyndhurst and agreed by Zero Waste Scotland. Participants were recruited by specialist agency Criteria according to Brook Lyndhurst's instructions. Incentives were offered for completing the pre- and post-tasks and attending the groups.

The sample structure was designed to provide a balanced spread of participants across the following characteristics:

- Types of area – urban, mixed and rural; coastal and inland; local authorities with above, below and average LEAMs scores
- Regions of Scotland – lowland, central, highland; east and west
- Socio-demographic characteristics – gender, age, social class
- Litter-relevant behaviours – drivers, smokers, train users, and people who visit different locations (urban centres, parks, scenic areas and beaches)

The selection of socio-demographic and behaviour characteristics drew on evidence from earlier Zero Waste Scotland litter research on littering attitudes and behaviour. Equal numbers of men and women were recruited. Two broad and overlapping social class criteria were chosen (6 groups x ABC1C2 and 6 groups x C1C2DE) with filters to ensure that at least six participants in each group were from the two relevant middle grades. Similarly, three broad and overlapping age bands were specified, with four groups recruited for each (under 30, 25-45 and 40-65). The full recruitment specification and application of quota filters across groups is provided in Annex 7.2. Summary details are shown in table 1, including a group identifier which is used throughout the report where quotations are used. In total 120 people were recruited of which 113 attended a group.

Table 1 – Sample characteristics

Location	Area type	Age			Socio-economic group		Group identifier in the report ¹
		Under 30	25-45	40-65	ABC1C2	C1C2DE	
Aberdeen	Urban, East, Highland						Urban 1
Aberdeen	Urban, East, Highland						Urban 2
Ayr	Mixed, West, Lowland						Mixed 1
Ayr	Mixed, West, Lowland						Mixed 2
Dumfries	Rural, West, Lowland						Rural 1
Dumfries	Rural, West, Lowland						Rural 2
Glasgow	Urban, West, Central						Urban 3
Glasgow	Urban, West, Central						Urban 4
Perth	Mixed, East, Highland						Mixed 3
Perth	Rural, East, Highland						Rural 3
Stirling	Mixed, East, Central						Mixed 4
Stirling	Mixed, East, Central						Mixed 5

1 The classifications are derived from Scottish Government classifications of local authority areas. Perth was selected on the basis of Perthshire being classified as rural: specific recruitment quotas were set in the second Perth group to ensure most participants lived outside the urban area; there were also rural residents in the first group described as "mixed".

7.1.2 Pre- and post-task surveys

In the expectation that group discussions could be influenced by strongly felt emotions, it was decided that a pre-task survey and exercise would help to frame and anchor participants' individual contributions. It would also provide some evidence of prior opinions to sense-check what was heard in the groups.

Participants were asked to take photos of their local area to show what these normally look like and to illustrate examples of litter seen in the course of everyday life. The exercise was included to make participants think about what they actually see in normal life, as opposed to what they imagine they see, and to provide stimulus material to use in the groups.

In addition, participants were sent a link to a short online survey which covered:

- Rating of factors important to their quality of life
- Rating of different aspects of their local area (litter was one of 10 items included, together with some other aspects of street cleanliness – see results in section 2)
- Rating of how much litter they typically see in 12 different types of place
- For five of those places, rating of how big a problem different litter types are felt to be in each location
- Self-reported littering behaviour
- Attitudes to littering

The same questions were included in a post-task survey completed up to one week after attending the group, which was designed to check whether perceptions and attitudes had changed in the light of

the group discussions. Further questions were added to capture perceptions about individual priorities for tackling litter, for the research team to consider alongside the evidence from the groups.

In total 107 participants completed the pre-survey and 82 the post survey (2 of whom had not completed the pre-task survey). Results were analysed separately for the two surveys and for the sub-sample that completed both. Topline results from the surveys can be found in Annex 7.3.

7.1.3 Discussion groups

Groups were conducted over two consecutive weeks, led by experienced moderators from Brook Lyndhurst supported by a note taker. Discussions were recorded and professionally transcribed. Notes and transcripts were both used to develop the analysis, alongside data from the surveys and photos provided by participants.

Topics covered

- Each group lasted 1½ hours, split into four broad parts:
- Introductory discussion of likes and dislikes about areas lived in and regularly visited; thoughts on environmental quality and cleanliness of those places; unprompted thoughts about litter.
- A prompted exercise (multiple sorting, which is described further below) to explore, in an undirected way, how participants categorise, describe and prioritise different 'litter situations' (combinations of types and places)
- Additional probing of views about places where litter is seen, what is noticeable and most concerning, and how participants perceive amounts, using visual photo stimulus. To keep this discussion manageable, different places were prompted in each group (see Annex 7.7) following an unprompted opening discussion about litter locations.
- Discussion of priorities for tackling litter problems

A list of key places and litter types was agreed in consultation with Zero Waste Scotland and these were specifically prompted in some of the exercises, as denoted by ticks in table 2 below. The choice of places and types struck a balance between wanting to cover as broad a range of situations as possible and ensuring that the number was feasible to cover in enough depth in the discussions. The analysis of places and types also took into account mentions made during the unprompted conversations in the groups, which captured views about a small number of other litter situations not on the prompted list.

Table 2 – Coverage of litter places and types in the research exercises

Covered in:	Pre & post task survey	Card sort	Photo prompt in 'amounts' discussion
Place			
Residential areas (your street)	✓	✓	✓
Other streets in your neighbourhood	✓		
City centres	✓	✓	✓
Parks and recreation areas	✓	✓	✓
Scenic areas – countryside, beach, mountains	✓	✓	✓
Roadside (including lay-bys)	✓	✓	✓
Trackside	✓		✓
On trains/buses	✓		

Table 2 – continued

Covered in:	Pre & post task survey	Card sort	Photo prompt in 'amounts' discussion
By waterways	✓		
Derelict or unused sites in urban areas	✓		
Types			
Cigarette butts and cartons	✓	✓	
Chewing gum	✓	✓	
Drug equipment	✓	✓	
Plastic carrier bags (SCUB)	✓	✓	
Banana skins, apple cores etc	✓	✓	
Fast food cartons & leftovers	✓	✓	
Plastic soft-drink bottles and/or cans	✓	✓	
Glass bottles	✓	✓	
Sweet and crisp wrappers	✓	✓	
Discarded newspapers and scraps of paper	✓	✓	
Dog fouling	✓		
Mattresses or furniture left on the street	✓		✓

The multiple sorting exercise

The multiple sorting procedure is a qualitative methodology rooted in psychology which enables researchers to gain a deep understanding of how participants relate to the topic in question (litter) and the associations they make between different aspects of it. In brief, participants are asked to sort a set of items (each one on a card) into groups on the basis of how similar items feel to each other. They can sort items into as many or few categories as they like and are asked to give a title to each of the categories they make. Apart from that, no rules or guidance are given to participants. Several rounds of sorting take place. In sorting more than once it is expected that deeper participant-held concepts will be revealed than if only first responses were elicited. Results are recorded and plotted in software that shows how items are grouped for the sample as a whole and sub-samples of interest. These are interpreted alongside notes and transcripts of conversations during the sort exercise.

In this research participants were divided into male and female sub-groups since earlier research had shown gender to be a factor in litter attitudes. Twenty six items were presented as text descriptions on individual cards to represent a variety of litter situations: some were places with different amounts of litter; others were specific types (see Annex 7.5). The exercise had been piloted in a pre-group and some adjustments made. Three sorts were conducted: the first two were unstructured, as described above; the third sort was structured, in which participants were asked to group items according to the perceived level of priority for authorities to tackle.

7.1.4 Limitations

The normal limitations of qualitative research apply to this study. Qualitative approaches are designed to generate rich understanding about how participants think about a topic and explain their reactions or behaviours. It is not designed to measure how many people hold those views or to be the basis for generalising to the whole population (something for which quantitative survey methods are more suitable). In this context, it is important to read the pre- and post-task survey findings as representative only of what participants in this study reported, recognising they may not be representative of the whole Scottish population.

Having reviewed the findings, the research team considers that the methods used had an influence in some places on how participants responded to certain questions. Most notably, their rating of how problematic different items are in given places appears to have captured hypothetical projections of how bad it would be *if* it occurred, as well as how much of a problem it *actually is* to them at present. Given the breadth of nuance around litter reactions described in this report there would be a case for cognitive testing of questions if Zero Waste Scotland were to commission surveys in future.

While the pre-task did its job of focusing participants' attention in the discussion groups on what they actually experienced, there was evidence that it had primed some responses that may not otherwise have been so prominent. This was especially true of drug related litter which, further probing revealed, tends to stay in people's minds once introduced even though this kind of litter was very rarely seen². This outcome reflects the visceral and fearful reaction that participants had to discarded drug equipment.

The final limitation relates to the use of photo prompts in the groups. The pictures taken by participants worked well to stimulate discussion about litter in their local areas as they reacted to each other's photos. There was more mixed success in using photographs to prompt discussion of amounts of litter in different places. The exercise revealed that people can be strongly influenced by the wider context shown in the picture (e.g. the weather or the style of building) as well as what types of litter are shown, which affects how they perceive an amount. The interaction between place-type-amount in shaping perceptions is covered in section 4. Some of the photo prompts were also less effective because of the difficulty the team had in sourcing pictures that completely captured the situations being prompted. Notably, participants had difficulty differentiating between the amounts shown in the LEAMS guidance photos that were used as prompts for residential areas (see section 4). In the context of future research or communications, it may be worth Zero Waste Scotland considering how to further develop its library of litter situations, including scenes that could control for some of the confounding factors (e.g. weather, wider condition of the built environment etc.).

² The rarity of drug related litter is confirmed in Zero Waste Scotland's report, Exploring the Indirect Costs of Litter in Scotland <http://www.zerowastescotland.org.uk/sites/files/zws/Indirect%20Costs%20of%20Litter%20-%20Final%20Report.pdf>

7.2 Sample characteristics

Recruitment to the groups

Table 3 – Recruitment quotas by group

Date	Location	Time	Urban density/Area	Gender ³	SEG ⁴	Age	Tenancy	Transport Cars ⁵ and trains ⁶	Visitors (i) Beaches ⁷ and urban parks ⁸	Visitors (ii) City centres ⁹ and Scenic areas ¹⁰	Smokers ¹¹
Mon 28th April	Dumfries 1	6.00-7.30pm	Rural, West, Lowland ¹²	Mix	ABC1C2	40-65		At least 3 x Drivers			At least 2 x Smokers
Mon 27th April	Dumfries 2	8.00-9.30pm	Rural, West, Lowland ¹³	Mix	C1C2DE	25-45		At least 3 x Drivers			At least 2 x Smokers
Tues 29th April	Ayr 1	6.00-7.30pm	Mixed, West, Lowland	Mix	C1C2DE	40-65		At least 3 x Drivers	At least 4 x Beach/coast visitors	At least 2 x Visitors of areas of natural beauty	At least 2 x Smokers
Tues 29th April	Ayr 2	8.00-9.30pm	Mixed, West, Lowland	Mix	ABC1C2	Under 30		At least 3 x Rail passengers	At least 4 x Beach/coast visitors	At least 5 x town/city centre visitor	At least 2 x Smokers
Weds 30th April	Glasgow 1	6.00-7.30pm	Urban, West, Central	Mix	C1C2DE	Under 30	At least 3 x Flat/tenement dweller		At least 4 x Park visitors	At least 5 x town/city centre visitor	At least 2 x Smokers
Weds 30th April	Glasgow 2	8.00-9.30pm	Urban, West, Central	Mix	ABC1C2	25-45		At least 3 x Rail passengers	At least 4 x Park visitors	At least 5 x town/city centre visitor	At least 2 x Smokers
Tues 6th May	Stirling 1	6.00-7.30pm	Mixed, East, Central	Mix	C1C2DE	40-65		At least 3 x Rail passengers	At least 4 x Park visitors	At least 2 x Visitors of areas of natural beauty	At least 2 x Smokers
Tues 6th May	Stirling 2	8.00-9.30pm	Mixed, East, Central	Mix	ABC1C2	Under 30		At least 3 x Drivers		At least 5 x town/city centre visitor	At least 2 x Smokers
Weds 7th May	Perth 1	6.00-7.30pm	Rural, East, Highland ¹⁴	Mix	C1C2DE	25-45		At least 3 x Drivers		At least 2 x Visitors of areas of natural beauty	At least 2 x Smokers
Weds 7th May	Perth 2	8.00-9.30pm	Mixed, East, Highland	Mix	ABC1C2	40-65			At least 4 x Park visitors	At least 5 x town/city centre visitor	At least 2 x Smokers
Thurs 8th May	Aberdeen 1	6.00-7.30pm	Urban, East, Highland	Mix	C1C2DE	Under 30	At least 3 x Flat/tenement dweller	At least 3 x Drivers	At least 4 x Park visitors	At least 5 x town/city centre visitor	At least 2 x Smokers
Thurs 8th May	Aberdeen 2	8.00-9.30pm	Urban, East, Highland	Mix	ABC1C2	25-45		At least 3 x Rail passengers	At least 4 x Beach/coast visitors	At least 2 x Visitors of areas of natural beauty	At least 2 x Smokers

Table 3 – notes

- 3 Each group to include at least 4 men and 4 women
- 4 For SEGS ABC1C2: at least 3 participants to be B and at least 3 to be C1. For SEGS C1C2DE: at least 3 participants to be C3 and at least 3 to be D.
- 5 “Drivers” defined as those who drive at least 40 miles in an average week
- 6 “Rail passengers” defined as those who take the train at least twice a month
- 7 “Beach/coast visitors” defined as those who visit Scottish beaches at least 4 times a year
- 8 “Park visitors” defined as those who visit urban parks at least every month
- 9 “Town/city centre visitors” defined as those who visit town/city centre shopping areas at least twice a month
- 10 “Visitors of areas of natural beauty” defined as those that at least twice a year visit areas of Scotland they would consider to be scenic - excluding the coast (e.g. National Parks, mountains)
- 11 “Smokers” defined as people who smoke every day
- 12 To include at least 3 participants who do not live in the town
- 13 To include at least 3 participants who do not live in the town
- 14 To include at least 5 participants who do not live in the city

Composition of the samples

Table 4 – Demographic composition of the groups and survey participants

Sample	Total number	Gender		C1	C2	DE	18-29	30-39	40-49	50-59	60+
		Male	Female								
Group attendees	113	51	62	24	25	17	46	14	30	19	4
Pre-survey respondents	107	47	60	21	23	16	45	12	30	16	4
Post-survey matched sample ¹⁵	80	36	44	18	12	11	33	11	23	11	2

¹⁵ Actually, 82 participants completed the post-survey, but two of these had not completed the pre-survey and so their records were not included (the main purpose of the post-survey was to compare answers to the pre-survey).

7.3 Survey topines for pre- and post-tasks

Please note that the figures below only represent the responses from those participating in the research. The research project as a whole provides robust insights and understanding that may be used as a platform for developing policy and communications (alongside other evidence), but it has not attempted to measure the extent to which the perceptions identified in the research are held across Scotland as a whole. Results should therefore not be generalised to the whole Scottish population. All data below show counts not percentages.

7.3.1 Pre-task survey

Table 5: How important are the following to your quality of life?

Answer Options	Very important	Fairly important	Neither important nor unimportant	Fairly unimportant	Not at all important	Response Count
Access to local services	53	45	9	0	0	107
The level of crime	90	17	0	0	0	107
How well neighbours get on with each other	35	50	18	2	2	107
The level of traffic noise	28	53	24	2	0	107
How clean the street is	65	40	1	1	0	107
The level of air quality	59	40	7	1	0	107
The amount of dog fouling	72	33	1	1	0	107
The amount of litter	61	46	0	0	0	107
The physical state of pavements and roads	73	29	5	0	0	107
The amount of fly tipping	54	42	11	0	0	107
Any further comments						7
					answered question	107
					skipped question	0

Table 6: How would you rate the following aspects of the local area where you live?

Answer Options	Very unsatisfactory	Poor	Acceptable	Good	Very good	Response Count
Access to local services	4	7	32	52	12	107
The level of crime	2	9	30	50	16	107
How well neighbours get on with each other	2	6	32	44	23	107
The level of traffic noise	4	7	39	41	16	107
How clean the streets are	4	11	45	38	9	107
The level of air quality	3	6	31	49	18	107
The amount of dog fouling	17	28	30	23	9	107
The amount of litter	7	13	38	44	5	107
The physical state of pavements and roads	12	47	28	14	6	107
The amount of fly tipping	8	14	28	40	17	107
Any further comments						8
					answered question	107
					skipped question	0

Table 7: When you are out and about, how much litter do you typically see in these types of place....? (If you don't ever visit or pass through any of these places, please tick "not applicable")?

Answer Options	None	Not very much	Some	A fairly large amount	A very large amount	Not applicable	Response Count
Your street	18	54	28	5	1	1	107
Other streets in your neighbourhood	4	39	49	11	1	3	107
Town and city centres	0	16	53	31	7	0	107
Parks or recreation areas	1	28	55	19	4	0	107
Beaches	1	33	42	17	4	10	107
Other scenic areas (eg national parks or mountains)	3	49	33	5	0	17	107
Roadside litter	0	18	65	20	3	1	107
Litter in lay-bys	3	14	44	30	8	8	107
Litter on trains/buses	2	31	40	13	6	15	107
Railway trackside litter	4	17	31	18	10	27	107
Litter by waterways	3	15	51	13	8	17	107
Derelict or unused sites in urban areas	1	6	30	33	25	12	107
Any further comments							10
						answered question	107
						skipped question	0

Table 8: In your opinion, which of the following items could be described as litter?

Answer Options	Not litter	Maybe litter	Definitely litter	Response Count
Cigarette butts and cartons	2	7	98	107
Chewing gum	6	13	88	107
Drug-related items (e.g. needles)	13	8	86	107
Plastic carrier bags	2	4	101	107
Banana skins, apple cores and similar items	6	29	71	106 ¹⁶
Fast food cartons (including uneaten food contents)	1	0	106	107
Plastic soft drink bottles and/or soft drink cans	1	3	103	107
Glass bottles (including beer or wine bottles)	2	3	102	107
Sweet wrappers and crisp packets	1	0	106	107
Discarded newspapers and scraps of paper	1	4	102	107
Dog fouling	11	14	82	107
Mattress or furniture left on the street	11	8	87	106
			answered question	107
			skipped question	0

¹⁶ Please note that for some questions it was possible for respondents to skip parts of the question, but never the entire question. Hence, the response count is not 107 for every row, even though every participant answered (some element) of every question.

Table 9: Please consider the items you typically see ON YOUR STREET. How do you feel about the following on your street?

Answer Options	Not a problem at all	A small problem	A fairly big problem	A very big problem	No opinion	Response Count
Cigarette butts and cartons	30	42	19	14	1	106
Chewing gum	38	36	21	10	1	106
Drug-related items (e.g. needles)	73	3	1	23	4	104
Plastic carrier bags	38	42	13	11	1	105
Banana skins, apple cores and similar items	61	31	9	5	1	107
Fast food cartons (including uneaten food contents)	43	30	17	13	2	105
Plastic soft drink bottles and/or soft drink cans	33	41	19	12	1	106
Glass bottles (including beer or wine bottles)	49	24	14	18	1	106
Sweet wrappers and crisp packets	29	48	20	9	1	107
Discarded newspapers and scraps of paper	37	48	12	6	2	105
Dog fouling	26	37	16	27	1	107
Mattresses or furniture left on the street	63	13	6	19	5	106
Further comments						12
					answered question	107
					skipped question	0

Table 10: Please consider the items you typically see in town and city centres. In TOWN AND CITY CENTRES how do you feel about the following?

Answer Options	Not a problem at all	A small problem	A fairly big problem	A very big problem	No opinion	Response Count
Cigarette butts & cartons	1	20	46	39	0	106
Chewing gum	4	21	38	41	2	106
Drug-related items (e.g. needles)	34	26	12	30	5	107
Plastic carrier bags	8	40	31	24	1	104
Banana skins, apple cores and similar items	33	48	17	8	1	107
Fast food cartons (including uneaten food contents)	1	22	50	34	0	107
Plastic soft drink bottles and/or soft drink cans	3	35	44	25	0	107
Glass bottles (including beer or wine bottles)	10	40	28	28	1	107
Sweet wrappers and crisp packets	3	34	46	23	0	106
Discarded newspapers and scraps of paper	8	45	35	17	2	107
Dog fouling	12	49	18	28	0	107
Mattresses or furniture left on the street	34	39	9	21	3	106
Further comments						6
						answered question 107
						skipped question 0

Table 11: Please consider the items you typically see in (urban) parks and recreation areas. In PARKS AND RECREATION AREAS how do you feel about the following?

Answer Options	Not a problem at all	A small problem	A fairly big problem	A very big problem	No opinion	Response Count
Cigarette butts & cartons	8	34	34	29	1	106
Chewing gum	12	39	37	19	0	107
Drug-related items (e.g. needles)	32	26	12	31	6	107
Plastic carrier bags	6	50	27	21	3	107
Banana skins, apple cores and similar items	23	58	15	8	3	107
Fast food cartons (including uneaten food contents)	12	45	26	23	1	107
Plastic soft drink bottles and/or soft drink cans	1	45	39	20	1	106
Glass bottles (including beer or wine bottles)	8	37	32	27	3	107
Sweet wrappers and crisp packets	4	50	33	19	0	106
Discarded newspapers and scraps of paper	13	56	21	12	3	105
Dog fouling	2	19	41	45	0	107
Mattresses or furniture left on the street	47	27	11	18	3	106
Further comments						4
					answered question	107
					skipped question	0

Table 12: Please consider the items you typically see in SCENIC AREAS, COUNTRYSIDE and BEACHES. In these kinds of places, how do you feel about the following?

Answer Options	Not a problem at all	A small problem	A fairly big problem	A very big problem	No opinion	Response Count
Cigarette butts & cartons	8	44	30	24	1	107
Chewing gum	28	37	22	17	3	107
Drug-related items (e.g. needles)	40	25	5	30	7	107
Plastic carrier bags	4	46	37	18	2	107
Banana skins, apple cores and similar items	21	59	14	9	2	105
Fast food cartons (including uneaten food contents)	11	47	29	18	2	107
Plastic soft drink bottles and/or soft drink cans	1	43	43	19	1	107
Glass bottles (including beer or wine bottles)	9	40	27	27	3	106
Sweet wrappers and crisp packets	2	50	38	16	1	107
Discarded newspapers and scraps of paper	18	50	20	15	2	105
Dog fouling	9	29	34	32	2	106
Mattresses or furniture left on the street	48	22	11	21	5	107
Further comments						6
					answered question	107
					skipped question	0

Table 13: Please consider the items you typically see by the SIDE OF MAIN ROADS and in LAY-BYS. In these kinds of places, how do you feel about the following?

Answer Options	Not a problem at all	A small problem	A fairly big problem	A very big problem	No opinion	Response Count
Cigarette butts & cartons	11	31	39	22	3	106
Chewing gum	32	39	16	14	6	107
Drug-related items (e.g. needles)	44	19	10	23	11	107
Plastic carrier bags	10	27	46	20	4	107
Banana skins, apple cores and similar items	32	37	23	10	5	107
Fast food cartons (including uneaten food contents)	6	28	44	26	3	107
Plastic soft drink bottles and/or soft drink cans	6	29	48	21	3	107
Glass bottles (including beer or wine bottles)	16	33	27	26	5	107
Sweet wrappers and crisp packets	8	32	42	20	5	107
Discarded newspapers and scraps of paper	10	41	32	18	5	106
Dog fouling	36	29	19	16	7	107
Mattresses or furniture left on the street	24	28	22	24	9	107
Further comments						5
						answered question 107
						skipped question 0

Table 14: Please select the statement which best describes how often you leave or drop litter (NB please answer honestly - your individual answers will be anonymised and will not be revealed to anyone beyond the research team)

Answer Options	Response Percent	Response Count
I've never dropped litter	32.7%	35
I may have dropped small amounts of litter in the past, but I don't really remember, and don't intend to do so again	38.3%	41
I sometimes drop small bits and pieces of litter, but it's very rare	20.6%	22
I sometimes drop some litter, in certain circumstances	6.5%	7
I quite often drop litter	1.9%	2
I regularly drop litter	0.0%	0
		answered question 107
		skipped question 0

Table 15: Please select any reasons that apply to why you drop litter:

Answer Options	Response Percent	Response Count
I don't feel guilty about leaving litter - it's not a big issue	0.0%	0
Places are so dirty these days - it doesn't really matter if I leave litter	0.9%	1
Leaving litter isn't a problem if I know it's going to be cleaned up afterwards	0.9%	1
As long as it's only small bits and pieces I don't worry too much about leaving litter	3.7%	4
Sometimes there aren't any bins, or the bins are all full	20.6%	22
I occasionally drop things, but feel a bit guilty about it	19.6%	21
I sometimes drop litter by accident (eg it falls out of my pocket)	37.4%	40
I really don't want to leave litter, but sometimes it can't be avoided	25.2%	27
I don't ever drop litter, and never would, so none of the above apply	35.5%	38
answered question		107
skipped question		0

7.3.2 Post-task survey

Table 16: How important are the following to your quality of life?

Answer Options	Very important	Fairly important	Neither important nor unimportant	Fairly unimportant	Not at all important	Response Count
Access to local services	28	45	6	1	0	80
The level of crime	67	12	1	0	0	80
How well neighbours get on with each other	25	41	13	1	0	80
The level of traffic noise	17	43	18	2	0	80
How clean the street is	45	35	0	0	0	80
The level of air quality	38	38	4	0	0	80
The amount of dog fouling	45	34	0	1	0	80
The amount of litter	41	39	0	0	0	80
The physical state of pavements and roads	48	30	1	1	0	80
The amount of fly tipping	35	37	5	3	0	80
Any further comments						2
					answered question	80
					skipped question	0

Table 17: How would you rate the following aspects of the local area where you live?

Answer Options	Very unsatisfactory	Poor	Acceptable	Good	Very good	Response Count
Access to local services	1	2	22	37	18	80
The level of crime	0	5	18	39	18	80
How well neighbours get on with each other	0	1	22	37	20	80
The level of traffic noise	2	1	31	29	17	80
How clean the streets are	2	9	19	38	12	80
The level of air quality	2	5	14	40	19	80
The amount of dog fouling	5	21	22	23	9	80
The amount of litter	1	10	24	34	11	80
The physical state of pavements and roads	11	24	23	16	6	80
The amount of fly tipping	2	11	14	33	20	80
Any further comments						3
					answered question	80
					skipped question	0

Table 18: When you are out and about, how much litter do you typically see in these types of place....? (If you don't ever visit or pass through any of these places, please tick "not applicable")

Answer Options	None	Not very much	Some	A fairly large amount	A very large amount	Not applicable	Response Count
Your street	10	43	22	5	0	0	80
Other streets in your neighbourhood	2	25	41	9	2	1	80
Town and city centres	0	6	33	36	5	0	80
Parks or recreation areas	2	17	44	12	5	0	80
Beaches	1	22	39	11	3	4	80
Other scenic areas (eg national parks or mountains)	4	27	33	6	3	7	80
Roadside litter	1	16	37	21	4	1	80
Litter in lay-bys	1	12	30	21	10	6	80
Litter on trains/buses	0	22	33	11	2	12	80
Railway trackside litter	0	9	28	19	7	17	80
Litter by waterways	0	15	32	18	3	12	80
Derelict or unused sites in urban areas	2	6	14	37	14	7	80
Any further comments							2
							answered question 80
							skipped question 0

Table 19: In your opinion, which of the following items could be described as litter?

Answer Options	Not litter	Maybe litter	Definitely litter	Response Count
Cigarette butts and cartons	0	7	72	79
Chewing gum	2	13	65	80
Drug-related items (e.g. needles)	9	7	63	79
Plastic carrier bags	0	2	78	80
Banana skins, apple cores and similar items	11	30	39	80
Fast food cartons (including uneaten food contents)	0	2	77	79
Plastic soft drink bottles and/or soft drink cans	0	2	78	80
Glass bottles (including beer or wine bottles)	1	2	77	80
Sweet wrappers and crisp packets	0	2	76	78
Discarded newspapers and scraps of paper	0	4	75	79
Dog fouling	10	9	61	80
Mattress or furniture left on the street	9	5	66	80
			answered question	80
			skipped question	0

Table 20: Please consider the items you typically see ON YOUR STREET. How do you feel about the following on your street?

Answer Options	Not a problem at all	A small problem	A fairly big problem	A very big problem	No opinion	Response Count
Cigarette butts and cartons	22	43	10	5	0	80
Chewing gum	31	34	8	6	1	80
Drug-related items (e.g. needles)	58	7	0	9	5	79
Plastic carrier bags	30	35	11	4	0	80
Banana skins, apple cores and similar items	57	19	2	1	1	80
Fast food cartons (including uneaten food contents)	36	27	10	6	0	79
Plastic soft drink bottles and/or soft drink cans	27	35	11	7	0	80
Glass bottles (including beer or wine bottles)	42	21	7	10	0	80
Sweet wrappers and crisp packets	19	48	8	4	0	79
Discarded newspapers and scraps of paper	31	40	4	4	0	79
Dog fouling	19	32	12	17	0	80
Mattresses or furniture left on the street	53	14	3	9	0	79
Further comments						6
						answered question 80
						skipped question 0

Table 21: Please consider the items you typically see in town and city centres. In TOWN AND CITY CENTRES how do you feel about the following?

Answer Options	Not a problem at all	A small problem	A fairly big problem	A very big problem	No opinion	Response Count
Cigarette butts & cartons	1	16	27	36	0	80
Chewing gum	2	13	30	33	1	79
Drug-related items (e.g. needles)	21	24	12	15	7	79
Plastic carrier bags	3	31	34	12	0	80
Banana skins, apple cores and similar items	29	38	10	3	0	80
Fast food cartons (including uneaten food contents)	1	13	34	32	0	80
Plastic soft drink bottles and/or soft drink cans	2	21	40	17	0	80
Glass bottles (including beer or wine bottles)	4	32	22	20	2	80
Sweet wrappers and crisp packets	1	27	32	19	0	79
Discarded newspapers and scraps of paper	6	31	32	11	0	80
Dog fouling	8	34	17	20	1	80
Mattresses or furniture left on the street	26	29	11	13	1	80
Further comments						3
						answered question 80
						skipped question 0

Table 22: Please consider the items you typically see in (urban) parks and recreation areas. In PARKS AND RECREATION AREAS how do you feel about the following?

Answer Options	Not a problem at all	A small problem	A fairly big problem	A very big problem	No opinion	Response Count
Cigarette butts & cartons	2	41	25	12	0	80
Chewing gum	12	36	21	11	0	80
Drug-related items (e.g. needles)	28	26	7	17	2	80
Plastic carrier bags	7	36	26	10	1	80
Banana skins, apple cores and similar items	31	30	16	3	0	80
Fast food cartons (including uneaten food contents)	10	25	32	13	0	80
Plastic soft drink bottles and/or soft drink cans	1	34	30	15	0	80
Glass bottles (including beer or wine bottles)	4	31	25	18	2	80
Sweet wrappers and crisp packets	1	35	34	10	0	80
Discarded newspapers and scraps of paper	9	43	23	5	0	80
Dog fouling	1	17	28	33	1	80
Mattresses or furniture left on the street	35	22	7	13	3	80
Further comments						1
						answered question 80
						skipped question 0

Table 23: Please consider the items you typically see in SCENIC AREAS, COUNTRYSIDE and BEACHES. In these kinds of places, how do you feel about the following?

Answer Options	Not a problem at all	A small problem	A fairly big problem	A very big problem	No opinion	Response Count
Cigarette butts & cartons	5	34	26	13	2	80
Chewing gum	20	36	13	8	2	79
Drug-related items (e.g. needles)	33	18	9	16	4	80
Plastic carrier bags	3	35	30	10	1	79
Banana skins, apple cores and similar items	29	36	11	2	2	80
Fast food cartons (including uneaten food contents)	6	30	31	10	3	80
Plastic soft drink bottles and/or soft drink cans	3	32	32	12	1	80
Glass bottles (including beer or wine bottles)	5	29	26	16	3	79
Sweet wrappers and crisp packets	3	36	26	13	1	79
Discarded newspapers and scraps of paper	8	44	19	6	2	79
Dog fouling	6	26	27	20	1	80
Mattresses or furniture left on the street	28	21	10	16	4	79
Further comments						1
						answered question 80
						skipped question 0

Table 24: Please consider the items you typically see by the SIDE OF MAIN ROADS and in LAY-BYS. In these kinds of places, how do you feel about the following?

Answer Options	Not a problem at all	A small problem	A fairly big problem	A very big problem	No opinion	Response Count
Cigarette butts & cartons	3	38	21	14	4	80
Chewing gum	22	32	16	6	4	80
Drug-related items (e.g. needles)	33	22	6	12	7	80
Plastic carrier bags	6	23	32	15	4	80
Banana skins, apple cores and similar items	31	28	11	6	4	80
Fast food cartons (including uneaten food contents)	0	26	24	26	4	80
Plastic soft drink bottles and/or soft drink cans	0	24	30	21	4	79
Glass bottles (including beer or wine bottles)	6	27	21	21	4	79
Sweet wrappers and crisp packets	1	30	30	15	4	80
Discarded newspapers and scraps of paper	8	33	22	12	4	79
Dog fouling	23	29	14	9	5	80
Mattresses or furniture left on the street	17	23	18	16	6	80
Further comments						2
						answered question 80
						skipped question 0

Table 25: Please select the statement which best describes how often you leave or drop litter (NB please answer honestly - your individual answers will be anonymised and will not be revealed to anyone beyond the research team)

Answer Options	Response Percent	Response Count
I've never dropped litter	32.5%	26
I may have dropped small amounts of litter in the past, but I don't really remember, and don't intend to do so again	35.0%	28
I sometimes drop small bits and pieces of litter, but it's very rare	22.5%	18
I sometimes drop some litter, in certain circumstances	10.0%	8
I quite often drop litter	0.0%	0
I regularly drop litter	0.0%	0
	answered question	80
	skipped question	0

Table 26: Please select any reasons that apply to why you drop litter:

Answer Options	Response Percent	Response Count
I don't feel guilty about leaving litter - it's not a big issue	0.0%	0
Places are so dirty these days - it doesn't really matter if I leave litter	0.0%	0
Leaving litter isn't a problem if I know it's going to be cleaned up afterwards	1.3%	1
As long as it's only small bits and pieces I don't worry too much about leaving litter	6.3%	5
Sometimes there aren't any bins, or the bins are all full	25.0%	20
I occasionally drop things, but feel a bit guilty about it	18.8%	15
I sometimes drop litter by accident (eg it falls out of my pocket)	36.3%	29
I really don't want to leave litter, but sometimes it can't be avoided	26.3%	21
I don't ever drop litter, and never would, so none of the above apply	32.5%	26
	answered question	80
	skipped question	0

Table 27: As a result of attending the discussion group (and completing the tasks), did your views about litter change or stay the same?

Answer Options	Response Percent	Response Count
Didn't change	32.5%	26
Changed a little	48.8%	39
Changed a lot	18.8%	15
answered question		80
skipped question		0

Table 28: After attending the group (and completing the tasks), what is your view on the amount of litter that there is in the places where you go?

Answer Options	Response Percent	Response Count
There is a lot less litter than I thought there was	11.3%	9
There is a bit less litter than I thought there was	12.5%	10
There is about the same amount of litter as I thought there was	28.8%	23
There is a bit more litter than I thought there was	35.0%	28
There is a lot more litter than I thought there was	12.5%	10
answered question		80
skipped question		0

Table 29: In your personal opinion, what are the top 3 litter-related issues that authorities should be tackling?

Open-ended responses (coded)	Total mentions	First mention	Second mention	Third mention
Dog fouling	36	15	15	6
Bins	25	9	7	9
Drug equipment	22	10	4	8
Fast Food litter	22	5	8	9
Fly tipping	20	8	8	4
Glass	19	7	8	4
Cigarette butt	10	3	3	4
Chewing gum	9	3	1	5
Fines	9	0	4	5
Recreation area	8	3	2	3
Refuse	8	2	3	3
Education	6	3	1	2
Residential	6	2	3	1
City centre litter	5	3	2	0
Beaches	5	0	1	4
General litter	3	0	0	3
Street cleaners (more)	3	1	1	1
Visitor areas	2	0	0	2
Food waste (seagulls)	2	2	0	0
Ease of disposal	2	1	0	1
Sweet/crisp wrappers	2	1	1	0
Bird fouling	2	0	1	1
Plastic bags and bottles	2	0	1	1
Building waste - small items	1	0	0	1
Tackle origins of litter (e.g. fast food)	1	0	0	1
Weeds	1	0	0	1
Wind-blown litter	1	0	0	1
Other - road condition	1	1	0	0
Roadside litter	1	1	0	0
Walkways	1	0	1	0
Travellers	1	0	1	0
Paper	1	0	1	0
Empowerment	1	0	1	0
School grounds	1	0	1	0
Bottles (not specified)	1	0	1	0
Number of mentions	240	80	80	80

7.4 Discussion group topic guide

Time	Instructions	Purpose of section
7 mins		
0:07	<p data-bbox="555 1709 587 1883"><i>Introduction</i></p> <ul data-bbox="603 589 1042 1883" style="list-style-type: none"><li data-bbox="603 1417 627 1883">• Introduce yourself and Brook Lyndhurst<li data-bbox="635 1496 659 1883">• Toilets, fire drills, mobile phones<li data-bbox="667 1641 691 1883">• Purpose of groups:<ul data-bbox="691 589 746 1883" style="list-style-type: none"><li data-bbox="691 589 746 1883">◦ To discuss what you think about the quality of local areas where you live and visit, and to think a bit about different things that could be improved<li data-bbox="754 1529 778 1883">• Explain the need for honesty<ul data-bbox="778 589 1042 1883" style="list-style-type: none"><li data-bbox="778 589 834 1883">◦ We know that people can have very different views about these topics and can sometimes feel very strongly about them<li data-bbox="842 622 898 1883">◦ We'd really like to hear everyone's views, and to have a lively discussion, but it's really important to bear in mind there are no right or wrong answers – we want everyone to have a chance to express their opinion<li data-bbox="906 768 930 1883">• Will ask that people don't speak over each other and to allow each other the time to speak<ul data-bbox="930 1126 954 1883" style="list-style-type: none"><li data-bbox="930 1126 954 1883">◦ recorder can't pick up what's happening if everyone talks at once<li data-bbox="962 1574 986 1883">• Confidential, but recorded<ul data-bbox="986 1462 1042 1883" style="list-style-type: none"><li data-bbox="986 1462 1010 1883">◦ voice recording used as back-up<li data-bbox="1018 1653 1042 1883">◦ get permission <p data-bbox="1074 1731 1106 1883"><i>Icebreaker</i></p> <p data-bbox="1121 835 1145 1883">Quick intro to each other in pairs – who you are, who you live with, what kind of a street you live in.</p> <p data-bbox="1153 1395 1177 1883">Feedback: Introduce the person next to you.</p>	Warm up.

20 mins

0:27

Section 1 – local scene, quality of area and well-being

- To get us started, I'd like to hear what you **like** about the areas you live in.
 - What makes it a good area for you?
- Is there anything you **don't like** about your local area?
PROBE full range of views. Don't prompt on litter – if mentioned park for Qs at end of this section
- How do you feel about the **quality of the environment** of your area overall – the buildings, streets, pavements etc?
If participants ask what we mean by 'quality' say what it looks like and feels to them. Tease out what 'quality' means to participants.
- If **CLEAN or DIRTY** mentioned, *PROBE what makes somewhere seem clean or dirty*
If FLY-TIPPING OR EQUIVALENT MENTIONED probe what 'fly-tipping' means to people, whether this is different from 'litter', where is the boundary between a pile of litter and fly-tipping? Probe on frequency, items and how many experience it.

Thinking about places beyond the areas where you live:

- How would you rate the quality of environment in the town and city centres you visit on a regular basis – for work, leisure etc?
 - Why?
- And the quality of parks, countryside or other places you go for leisure?
 - Why?

PROBE for aspects that undermine quality in those places, if mentioned.
Same probe for CLEAN/DIRTY.

- Do you see **litter** when you are out and about? (OR "you've said you see litter...")
 - How often do you see litter?
 - Where do you tend to see litter?
 - How much litter do you see?
- What sorts of litter, do you see? **PROBE** if there are any items such as furniture/fly-tipping items, organic matter, dog fouling – whether everyone sees this as litter.
- How big a problem is litter overall?
- Do you think the public in general have the same views?

SHOW RESPONDENTS 6 PHOTOS ON THE SCREEN. Here are some photos you took in the last week or so:

- What are your first reactions to the photos? What are they showing?
- How would you describe the **amount** of litter you can see in the photos? *Leave for spontaneous descriptions/own language*

We're going to have a quick look at a few of these. For each photo:

- Who took this photo? Can you tell me a bit about it? Why did you take it?
 - How do you feel about that picture? Allow participant wording/descriptions before prompting.
 - What about the rest of you – what is your reaction to the photo, and what it's showing? How do you feel about it? Does anyone have any different perspectives? *PROBE, don't prompt.*
 - How would you describe the **amount** of litter you can see in the photo? *Leave for spontaneous descriptions/own language, and if not clear aim to get consensus on a 'large' or 'small' amount.*
- [Apologise to those whose photos weren't used, but reassure them that they will be used in analysis, and may feature in the final report.]

Framing: to set litter in wider context of local neighbourhood issues, LEQ and daily experience of being out and about
To gather, as much as possible, spontaneous views about litter (acknowledging limits from priming from the pre-task) before direct prompting in the MSP

Awareness/visibility of litter
View on what 'counts' as litter – can be compared to pre/post tasks

Also benchmarking for section 3

Framing of 'amounts' for MSP; reference for discussion in section 3

30 mins

0:57

Section 2 – Litter as a problem – multiple sorting exercise

We're now going to look at a range of different **litter situations** to find out how people feel about them. We're going to split you into two groups to do this – xx [moderator names] will explain what we want you to do once you're in groups.

DIVIDE GROUP INTO TWO BREAKOUTS – ONE MALE, ONE FEMALE
MAKE SURE EACH GROUP HAS A RECORDER AND YOU HAVE RECORD SHEETS FOR SORTS

Explanation

I've got a set of cards here which have descriptions of different litter situations written on them.

- I'd like you, together, to sort them into groups so that ones that seem similar are put together
- There is no right or wrong way to sort them – just put cards together that seem to go with each other
- You can split them into as many groups as you like
- While you're sorting, please discuss between you the reasons why you think cards should go together
- When you've arranged them into groups, please think up a name or description for each group/category

There is time for up to 3 sorts.

FIRST SORT: Unstructured sort (as above)

- *You must not prompt a basis for the sort. If they are having difficulty you can keep reminding/encouraging respondents to think of things that are similar/seem to go together.*
- *If there are any cards the group really can't agree on, then allow them to be put separately*
- **PROMPT: make sure they give groups names**
- *Fill in the recording sheet. NOTE particular areas of disagreement/consensus.*

SECOND SORT: Unstructured

- I'd now like you to mix up all the cards and put them into groups again – it doesn't matter what you chose last time, just think again about the things that are similar and put them together. You can have as many groups as you like.
- Again, say out loud what you're putting together and why - and make sure you give the group a name.

FILL IN RECORD SHEET. NOTE disagreement/consensus.

THIRD SORT: Structured

- We're going to do the sort for a last time, but this time a bit differently.
- Thinking about which litter situations are the biggest problems, can you sort the cards in order, from "highest priority for authorities to tackle", through "medium priority to tackle", to "lowest priority to tackle".
- You can have more groups than that if you want, as long as you put them in order from highest to lowest priority. [*If there is enough time, you can allow respondents to rank order every card.*]
- Again, discuss why you're putting them in that order as you go.
- Don't worry if you disagree – try and come to a consensus over the final solution – but we will be listening to each group to capture individual opinions

FILL IN RECORD SHEET: If ranked, record in order; if grouped, mark in group boundary on sheet, and name groups
NOTE disagreement/consensus.

Sorting exercise to see how participants frame different types of litter, and the language that they use to describe different groups.

25 mins

1:22

Section 3 – Litter problems and priorities in context

We now want to talk briefly about the **different places** where litter occurs.

PROBE: *difference in views/consensus*

- Where (in what kinds of place) is litter most noticeable? Any others...?
- Why? What makes it noticeable there? (e.g. *amount, character of place, nature of visit etc*)
- Where (in what kinds of place) is litter most of a concern? What makes it a problem there?
- What kinds of litter are most concerning (in those places)?

USE PICTURE PROMPT CARDS FOR (relevant) PLACES - SHOW IN RANDOM ORDER. Co-moderator to note the order of the prompt card references (on stickers on the back of the cards) so these can be matched with transcripts.

FOR EACH SHOW CARD:

- How would you describe the **amount** of litter shown in this picture? **PROBE** on whether it's an 'acceptable' amount or 'too much'/'unacceptable'.
 - How do you feel about this picture?
 - How much – if at all – does it bother you?
- Moderator to note which cards were seen as 'unacceptable'

'RESIDENTIAL' SHOW CARDS:

If any residential prompt cards were seen as unacceptable, compare it to the others (NB ones which were seen as acceptable). Show all four cards in order if necessary.

- Where is the threshold? In which photo does this become an acceptable/unacceptable amount?

OTHER LOCATIONS (e.g. beach, city, park, rail) IN TURN:

Compare photos to the other one from that location.

- What is your reaction to these two pictures now that they're side by side? Do they both show acceptable/unacceptable amounts?
- In your experience, is litter ever a problem in [these kinds] of place?
 - IF YES: in what ways is it a problem?
 - IF NO: why isn't it a problem? (e.g. *people don't drop it, cleaned up quickly, a certain amount is inevitable*)
- (If it happens) what kinds of litter cause problems here? Anything else? **PROBE** on cigarettes if not mentioned
- Is there generally a large or small amount of litter in these kinds of place? **PROBE, then prompt:**
 - What would a "small amount" of litter look like in this kind of place?
 - When does litter reach the point of being "too much" ("totally unacceptable") in this kind of place? What does it look like?
- How much does litter in this sort of place bother you? Why/why not?
- Where is the threshold – how much would the litter in XX picture have to be reduced by for it to stop bothering you?
- When would this become an acceptable/unacceptable amount? What if there were half that amount – would that be acceptable? What if it were just a few bits?
- What difference would it make to you if it were cleaned up?

ACROSS LOCATIONS:

Use prompt cards to abstract differences between different locations – e.g. if reactions are very different to similar amounts of litter. E.g.:

- Which of these situations do you find most concerning? Why?
- How would you describe the amounts that are shown here?

10 mins

1:32

Section 4 – priorities and close-out

The very last thing we want you to do is to consider priorities for the authorities tackling litter – including all the **types of litter** and **different places** we've talked about tonight.

Thinking about everything you've heard and thought tonight, if you had to choose what to tackle first:

- What and where would be your highest priority for tackling litter?
- How do others feel about that? What else would be a priority...?
- And what would be a lower priority or not a priority at all?
- And, lastly, if you could only choose one, what would it be – take a minute to think what you'd choose then I will ask around the table

Thank and close

THANKS TO RESPONDENTS
REMINDER OF POST-TASK SURVEY & ADDITIONAL INCENTIVE (NB CONTACT DETAILS ON SURVEY)
REMIND TO SIGN & COLLECT INCENTIVES FOR PRE-TASK & GROUP

7.5 List of sort cards

Table 30: List of sort cards used in the discussion group sort exercise

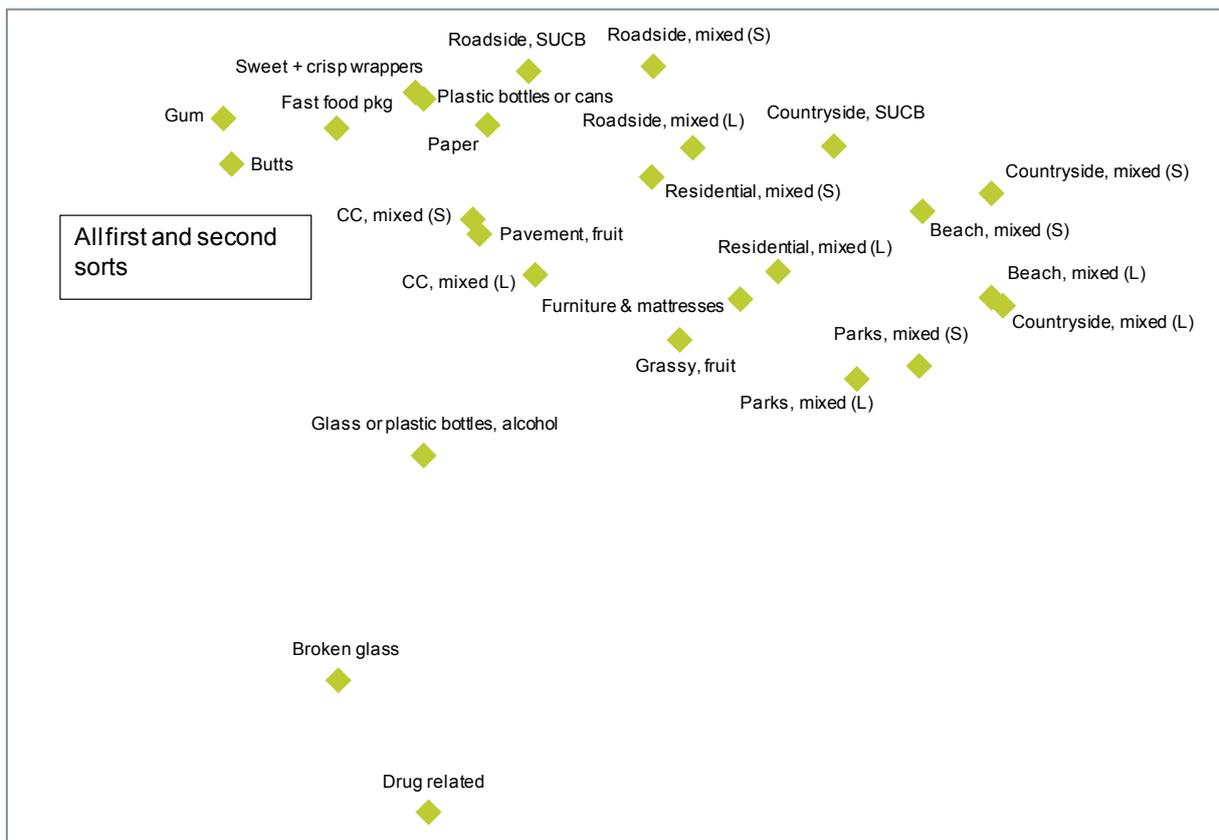
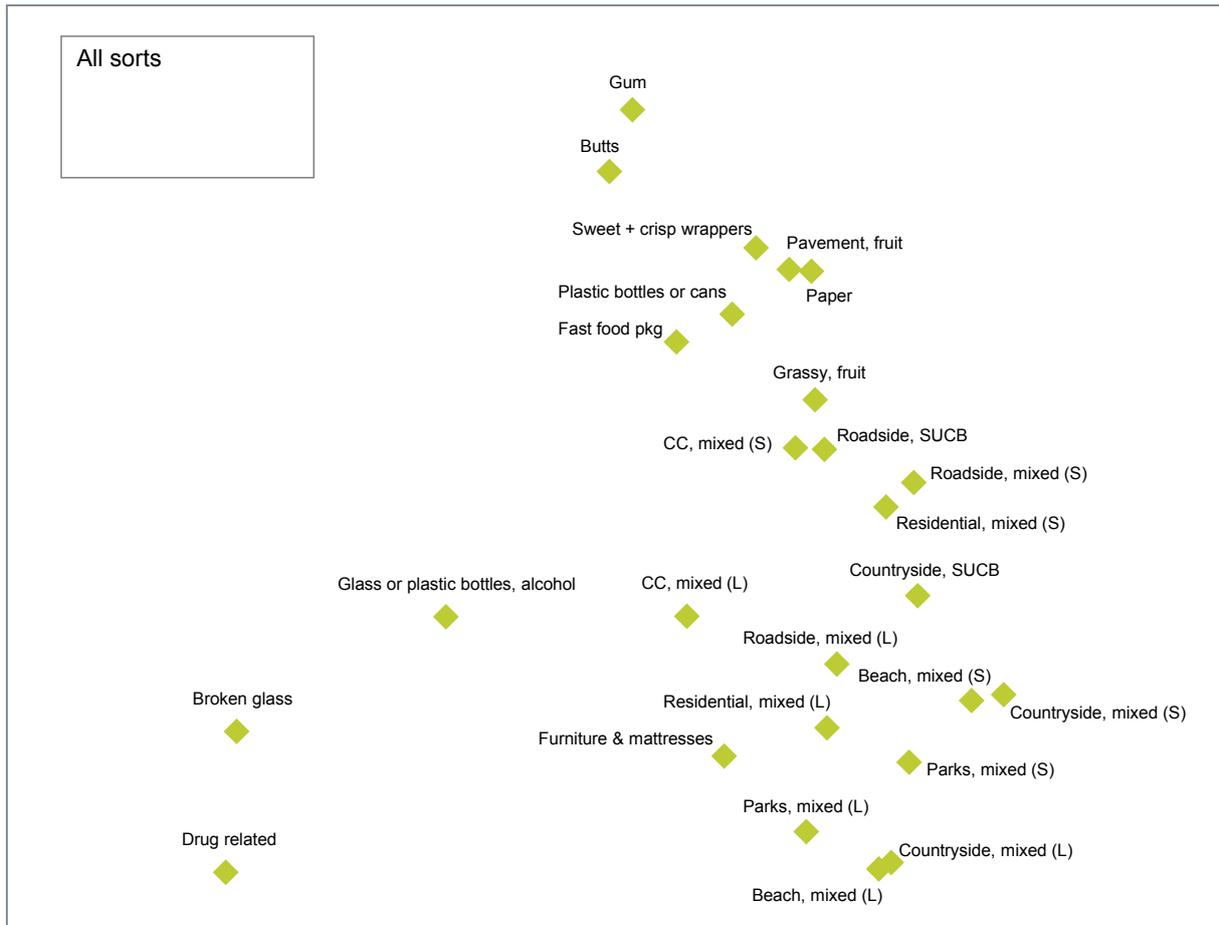
Letter	Location	Type of litter
A	Residential street	Mixed litter – small amount
B	City centre	Mixed litter – small amount
C	Residential street	Mixed litter – large amount
D	City centre	Mixed litter – large amount
E	'Grassy area'	Banana skins/apple cores
F	-	Sweet wrappers and crisp packets
G	-	Cigarette butts
H	Parks and recreation areas	Mixed litter – small amount
I	Pavement	Banana skins/apple cores
J	Parks and recreation areas	Mixed litter – large amount
K	Roadside	Plastic carrier bag
L	-	Plastic soft drinks bottles and drinks cans
M	-	Alcoholic drink bottles (glass or plastic)
N	-	Discarded furniture or mattresses
O	Roadside	Mixed litter – small amount
P	Beach	Mixed litter – small amount
Q	Roadside	Mixed litter – large amount
R	Beach	Mixed litter – large amount
S	-	Packaging from 'food on the go'
T	-	Discarded newspapers and scraps of paper
U	-	Discarded drug equipment (e.g. needles)
V	Countryside	Mixed litter – small amount
W	-	Chewing gum
X	Countryside	Mixed litter – large amount
Y	Countryside	Plastic carrier bag
Z	-	Broken glass

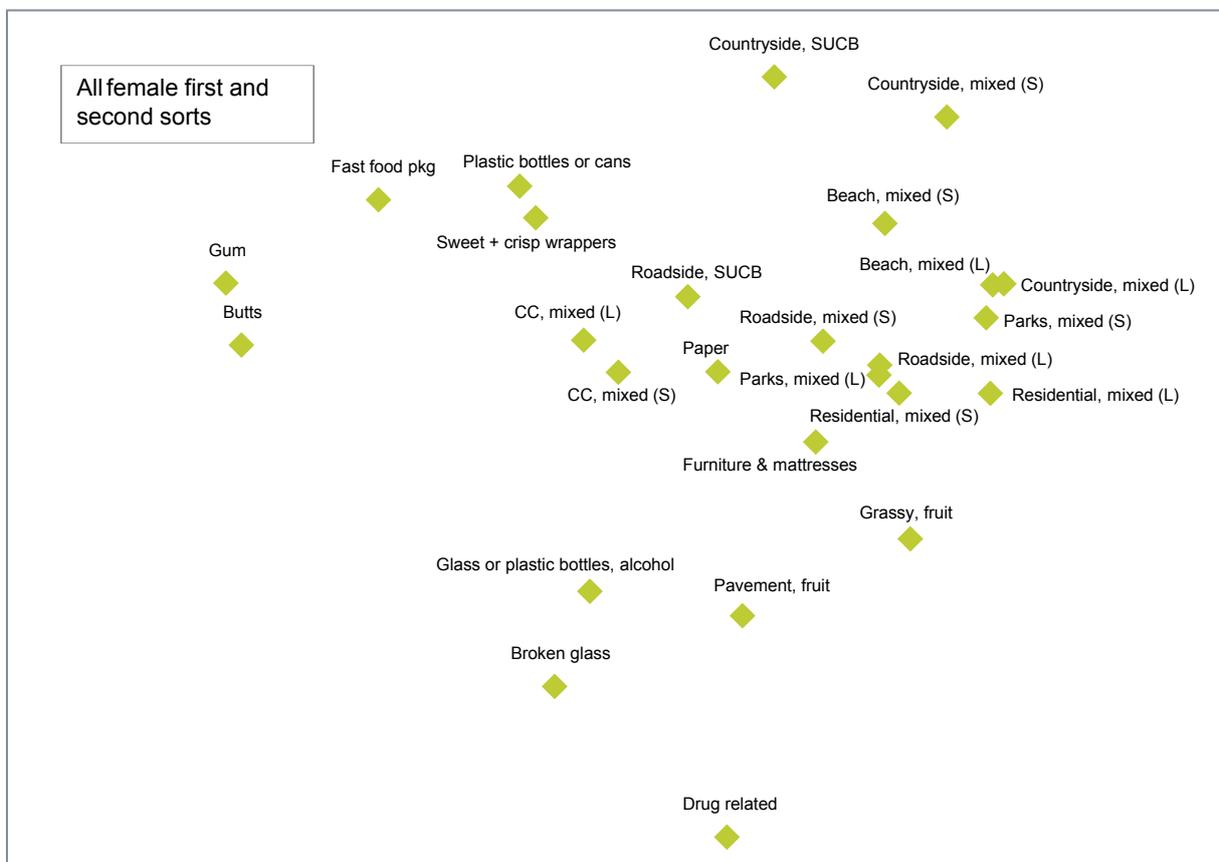
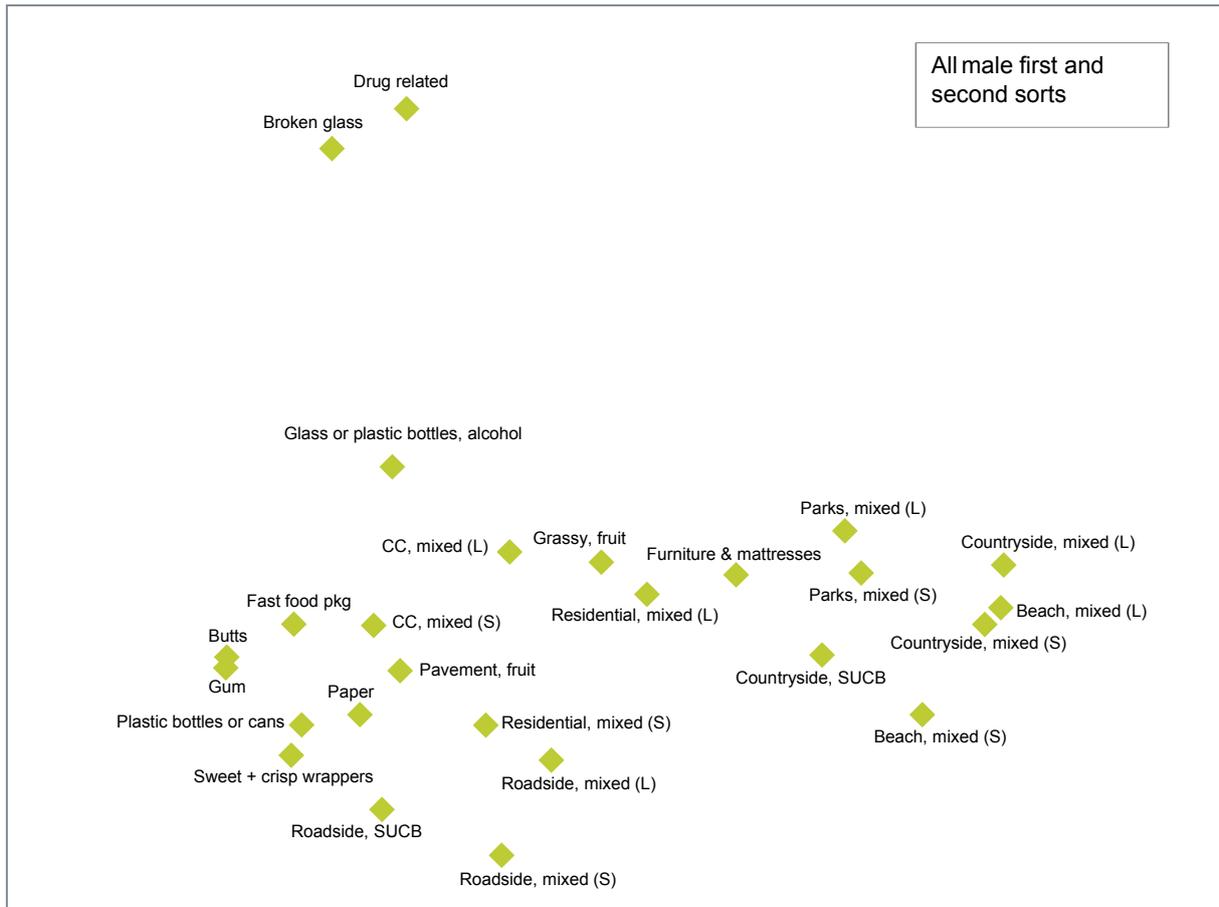
7.6 Selected plots from MSP

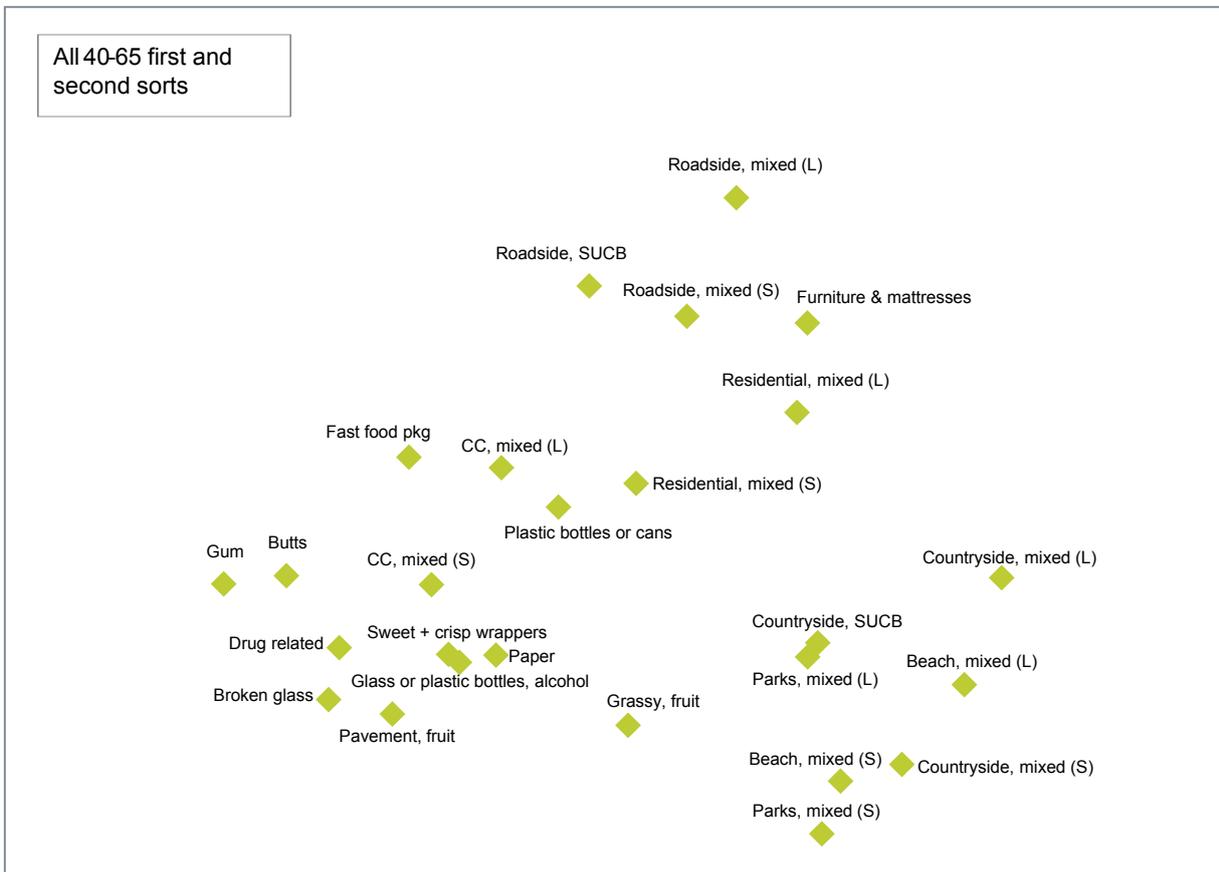
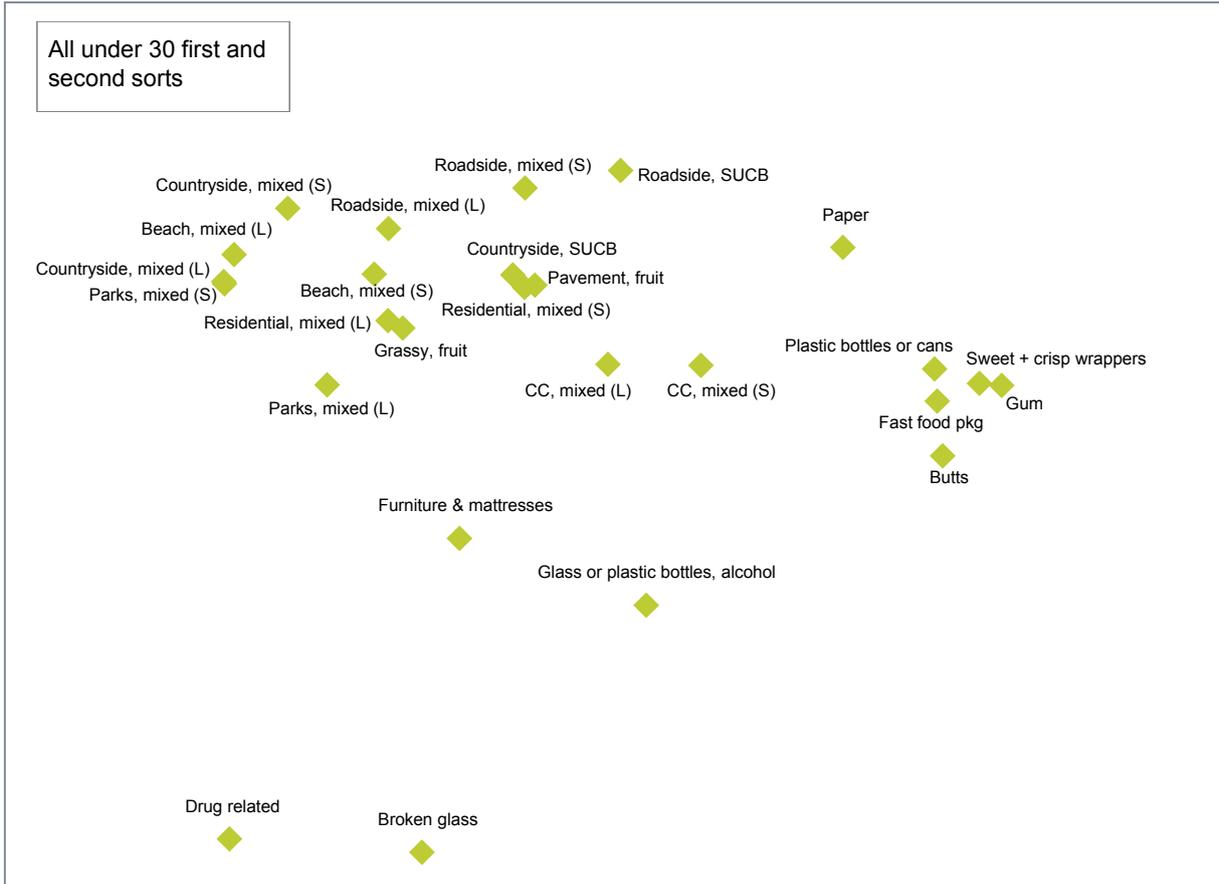
For analytical purposes, we chose to create 28 'combined' plots. Selected examples of these plots are displayed below the table.

Table 31: List of multiple sort procedure (MSP) plots created for analysis. (Those in bold in the table are also displayed below)

Number	Section	Sort
1	Overview	All sorts combined
2	Overview	All first sorts combined
3	Overview	All second sorts combined
4	Overview	All third sorts combined
5	Overview	All first and second sorts combined
6	Location	All rural first and second sorts combined (Dumfries 1 and 2; Perth 1)
7	Location	All mixed areas first and second sorts combined (Ayr 1 and 2; Stirling 1 and 2; Perth 2)
8	Location	All urban areas first and second sorts combined (Glasgow 1 and 2; Aberdeen 1 and 2)
9	Location	All rural third sorts combined (Dumfries 1 and 2; Perth 1)
10	Location	All mixed areas third sorts combined (Ayr 1 and 2; Stirling 1 and 2; Perth 2)
11	Location	All urban areas third sorts combined (Glasgow 1 and 2; Aberdeen 1 and 2)
12	Gender	All male first and second sorts combined
13	Gender	All female first and second sorts combined
14	Gender	All male third sorts combined
15	Gender	All female third sorts combined
16	SEG	All 'lower' SEG first and second sorts combined (Dumfries 2; Ayr 1; Glasgow 1; Stirling 1; Perth 1; Aberdeen 1)
17	SEG	All 'higher' SEG first and second sorts combined (Dumfries 1; Ayr 2; Glasgow 2; Stirling 2; Perth 2; Aberdeen 2)
18	SEG	All 'lower' SEG third sorts combined (Dumfries 2; Ayr 1; Glasgow 1; Stirling 1; Perth 1; Aberdeen 1)
19	SEG	All 'higher' SEG third sorts combined (Dumfries 1; Ayr 2; Glasgow 2; Stirling 2; Perth 2; Aberdeen 2)
20	Age	All under 30 first and second sorts combined (Ayr 2; Glasgow 1; Stirling 2; Aberdeen 1)
21	Age	All 25-45 first and second sorts combined (Dumfries 2; Glasgow 2; Perth 1; Aberdeen 2)
22	Age	All 40-65 first and second sorts combined (Dumfries 1; Ayr 1; Stirling 1; Perth 2)
23	Age	All under 30 third sorts combined (Ayr 2; Glasgow 1; Stirling 2; Aberdeen 1)
24	Age	All 25-45 third sorts combined (Dumfries 2; Glasgow 2; Perth 1; Aberdeen 2)
25	Age	All 40-65 third sorts combined (Dumfries 1; Ayr 1; Stirling 1; Perth 2)
26	Other	All occasions where the cards were sorted by 'location' combined
27	Other	All occasions where the cards were sorted by 'seriousness'/'concern'/'hazardousness' combined
28	Other	All occasions where the cards were sorted by how frequently seen/common things are, combined







7.7 List of photos used for place/amount discussion by group

Due to issues with file size, these images are presented in a separate document

ZWS - Litter insights (Recruiting 10 for each group, for 8-10 participants - see details below the table)												
Group number	Date	Location	Time	Urban density/ Area	Countryside	Residential areas	Roads and roadside	Trackside/ rail networks	Scenic areas and National parks	Town/city shopping areas	Beaches	Parks and recreation areas
1	Mon 27th April	Dumfries area	6.00-7.30pm	Rural, West, Lowland (To include at least 3 participants who do not live in the town)	1	1	1					
2	Mon 28th April	Dumfries area	8.00-9.30pm	Rural, West, Lowland (To include at least 3 participants who do not live in the town)	1	1	1					
3	Tues 29th April	Ayr	6.00-7.30pm	Mixed, West, Lowland		1	1		1			
4	Tues 29th April	Ayr	8.00-9.30pm	Mixed, West, Lowland		1		1		1		
5	Weds 30th April	Glasgow	6.00-7.30pm	Urban, West, Central		1				1		1
6	Weds 30th April	Glasgow	8.00-9.30pm	Urban, West, Central		1		1		1		1
7	Tues 6th May	Stirling	6.00-7.30pm	Mixed, East, Central		1		1	1			1
8	Tues 6th May	Stirling	8.00-9.30pm	Mixed, East, Central		1	1			1		
9	Weds 7th May	Perthshire (held in Perth)	6.00-7.30pm	Rural, East, Highland (To include at least 5 participants who do not live in the city)	1	1	1		1			
10	Weds 7th May	Perth	8.00-9.30pm	Mixed, East, Highland		1				1		1
11	Thurs 8th May	Aberdeen	6.00-7.30pm	Urban, East, Highland		1	1			1		1
12	Thurs 8th May	Aberdeen	8.00-9.30pm	Urban, East, Highland		1		1	1		1	



Zero Waste Scotland works with businesses, communities, individuals and local authorities to help them reduce waste, recycle more and use resources sustainably.

Find out more at zerowastescotland.org.uk