

Litter Innovation Fund (LIF)

Final Report

Further to your award it is important for us to evaluate how effective your research project has been and if the wider aims of the fund have been achieved.

The purpose of the Litter Innovation Fund is to support councils and communities in the development and evaluation of innovative approaches to tackling litter, which have the potential to be implemented more widely. The Litter Strategy also encourages people to use and contribute to online best-practice 'hubs', to help test and refine new innovations, share learning and extend the implementation of best-practice. It is therefore a condition of your award that you provide a full report of your project, to share in the knowledge and insights gained from your experiences and, if successful, to enable others to replicate it.

To assist these two aims, we require you to complete the following document. Section A sets out a template final report which is designed to provide the information needed to identify interventions with the potential for wider application, and to enable your project to be implemented by others if appropriate.. Please consult the monitoring and evaluation guidance for further help on answering any questions. You can also contact us at LitterFund@wrap.org.uk.

As set out in the guidance to applicants once we have signed off this report, successful applicants are expected to make the information from Section A of this template available online, to share best practice, enable others to replicate your project and learn from your experience. Information that you share with us may also be subject to requests for disclosure by Defra or MHCLG under the Freedom of Information Act or Environmental Information Regulations. It is likely therefore that information from this report will be released into the public domain. If there is any information contained in your report that you wish to remain confidential or regard as subject to copyright or commercially sensitive please clearly identify it. In particular, please do not include personal data of any individuals.

The completed form should be e-mailed to litterfund@wrap.org.uk

LIF Reference Code	ENG102-001	Date	20.02.19
Organisation Name	Keep Britain Tidy	Completed by	Nicola Boon, Marketing Manager

Project Abstract

Please provide an overview of this report, up to 400 words (Grant funding amount received, Aims, Results and Scalability of the project)

Through the Litter Innovation Fund, Keep Britain Tidy received a grant of £9,918 to pilot a 'Reflective Litter' campaign innovation in the City of London. The purpose of the trial was to use innovative poster materials (mirrors) at known 'careful littering' hotspots such as benches, ledges and fences, to make litterers stop and think about how leaving litter reflected on their personal image.

The project focused on 'careful littering' where people place litter in a spot, rather than throwing onto the floor. Those people tend to perceive they are not littering by carefully placing an item. There is strong evidence litter placement is most prevalent in areas of high-footfall outside, such as outside train stations, shops and also on public transport. The items that are mostly commonly observed to be carefully placed are newspapers, cigarette butts, coffee cups and drinks bottles/cans.

In an age of social media, smart phone and selfies, image seems to be everything. We proposed to use this insight to help people see that they are indeed littering when placing an item carefully and that littering can have a negative impact on what people think of them. Using mirrors within the intervention, we looked to 'reflect back' the image of that person, with focused on the messaging 'what would your friends think', 'what do people think of you', this messaging has been tested before to tackle blatant littering, but never to highlight the that carefully placing an item anywhere other than a bin is littering.

We worked closely with partners at the City of London Corporation to install the intervention at identified key 'litter placement' hotspots in the City of London at Moorgate Metropolitan University, Royal Exchange and Cheapside near St Pauls Station. with a view that people would then catch themselves in the 'frame' as they carried out the activity and would chose not to litter, raising awareness that the act is indeed littering. The University location was specifically chosen to target the intervention at a younger more image aware audience group to see if this further increased or decreased effectiveness.

A monitoring and evaluation framework was used to establish the effectiveness of the intervention. This consisted of:
- litter monitoring to identify the impact on littering behaviour (manual litter count and LEQ 7 point scale)

- perceptions surveys with members of the public at the site to assess their attitudes towards and awareness of the intervention, and
- an end-of-project interview with the partner to gather feedback and recommendations for future iterations of the trial.

The litter monitoring results found that the intervention delivered an average 19.5% reduction in placed litter during the trial across the 3 sites. It also showed a consistent +1 improvement at each site, based on the LEQ 7 step grading system.

Whilst perceptions survey respondents were sceptical about the effectiveness of the posters, and many initially found them difficult to notice, the survey did reveal that 71.30% agreed it was easy to understand what the posters were about and 63.30% agreed that reflective posters like these should be used in other areas to discourage litter. Showing that in general the public are very supportive of local authorities campaigning to improve public environmental behaviour.

Both the perceptions survey and partner interview indicated that larger, more noticeable posters would have had a greater impact on the litter reduction and public perception of the intervention. It was also felt that it would be more apt to conduct the trial in Spring/Summer when the issue of placed litter is more prevalent.

Keep Britain Tidy now plans to seek funding to re-trial the intervention taking onboard partner feedback about the scale of the posters. Before doing so careful consideration would need to be given to any highways restrictions around the mirrors and also placement in relation to traffic. We would then look at how 'Reflective Littering' can be scaled, making it available to local authorities across England.

Final Report

What did you want to achieve?

Please set out the project context, purpose and aims. This will have been laid out in your original application. For sharing purposes please include this, and any clarification needed

- What specific problem(s)/area(s) did your intervention target, and why did you choose it? Please include a description of the local context.
- What did your intervention aim to achieve? Set out the intended outcomes and impacts.

The intervention specifically set-out to tackle the issue of 'careful littering'; which is prevalent in high footfall commuter urban areas such as the City of London. 'careful littering' is defined as placing litter thoughtfully on a ledge or bench where people believe it will be cleaned anyway and therefore is not actually littering. Research carried out for Keep Britain Tidy by You Gov in summer 2018 found that one in four people (27%) admit to littering in this way when eating on-the-go.*

The reflective litter innovation intended to reduce this behaviour by reflecting back the image of the litter and also the litterer at identified hotspots. Highlighting that it is in fact littering and that it reflects badly on them as a member of the community.

The trial aimed to achieve the following outcomes;

- A significant proportion of litter at the trial location(s) to be prevented
- A positive impact on the time and resources the local authority has to spend clearing the litter
- Improved visitor perceptions of the area

Ultimately, the purpose of the trial was to prove whether a campaign concept of this nature could reduce careful littering, and if proven to do so to scale this solution up through other LA network members.

* <https://www.keeptobritaintidy.org/one-four-admit-carefully-littering>

What was your project plan?

- Describe the project plan – what you intended to do, including details of intervention site(s), timelines, use of resources (e.g. materials) and involvement of people and other organisations. Include details of a control or comparison site, if applicable.
- How did you expect your intervention to achieve its aims and intended impacts (see the ‘intervention pathway’ diagram in the Monitoring & Evaluation guidance)

The intervention aimed to reduce ‘careful littering’ behaviour by placing highly reflective mirror poster, carrying an anti-littering message, in know hotspot areas.

It was planned that the project would be carried out in partnership with one local authority partner, recruited through a ‘call for partners’ advertised through the Keep Britain Tidy’s Network of local authorities and other land managers. Here, applications for sites which suffer from ‘careful littering’ were to be put forward and selected for their suitability by Keep Britain Tidy. The successful authority would select a minimum of one high footfall, town centre location within England, with a concentrated number of on-the-go food outlets such as coffee shops and fast food retailers. The partner would be selected based on how far they demonstrate: commitment to the project and required delivery activities (e.g. on-the-ground monitoring), the suitability of their selected sites (high-footfall town/city centre locations on-the-go related litter issue), and ability to deliver the project within the given time timescale.

Keep Britain Tidy would be responsible for the design and production of the intervention, using our research and behavioural insights to ensure the intervention is as effective as possible, and working with the local authority partner to ensure the intervention works within operational constraints. For this, Keep Britain Tidy would work with their design agency to source the most appropriate reflective material for the posters, and the most appropriate installation method for the hotspots. The local authority partner would then install the posters in the target area, following practical installation guidance supplied by Keep Britain Tidy.

In order to robustly evaluate the effectiveness of the intervention, the successful partner would be responsible for carrying out ‘on-the-ground’ monitoring of on-the-go placed litter at the site for the duration of the project. This would be for a 2 week baseline phase, and an additional 2 weeks while the posters were in place. During this time, the partner would manually count the number of placed litter items at the hotspot. And also score the area using the 7 point LEQ rating following guidelines as per NI195 standards. Monitoring staff were instructed that an attempt should first be made to grade the site using one of the four EPA Code of Practice grades (A, B, C or D). If, however, the quality standard of a site is not accurately represented by one of the four grades

(i.e. the conditions fall in between the four EPA Code of Practice grades), one of the three intermediate grades may be used: B+ may be used if standards fall between Grade A and Grade B; B- if standards fall between Grade B and Grade C; and C- if standards are between Grade C and Grade D. Monitoring guidelines and data collection tools would be developed and provided by Keep Britain Tidy.

Grade	Description
A	None of the issues present
B+	Not formally defined
B	Predominantly free with some minor instances of the issue
B-	Not formally defined
C	Widespread with some accumulations of the issue
C-	Not formally defined
D	Heavily affected by the issue

Keep Britain Tidy also planned to understand public attitudes towards the intervention and the cleanliness of the target area by carrying out perceptions surveys at the site during peak lunchtime footfall. Questionnaires would be designed by Keep Britain Tidy and carried out by their experienced market research agency. The local authority partner was expected to take part in an end of project interview with Keep Britain Tidy, to give their feedback on the intervention and recommendations for improving future iterations or scaling of the Reflective Litter innovation. Keep Britain Tidy would then bring all of this data together and produce a final report about impact of the intervention.

It was expected this activity would run from November 2018 to February 2019.

Cropped overview of the project plan;

DEFRA Litter Innovation Fund		November														December																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
Deliverable	Responsible Party	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W

What was innovative about this project?

- Describe how your project differs from existing approaches, or extends/develops previous research.

To Keep Britain Tidy's knowledge, mirrors have never been used to tackle littering behaviour previously. Using innovative, stand-out materials to carry anti-littering messaging builds upon the success of previous campaigns such as 'We're Watching You' which utilises glow-in-the-dark print technologies to achieve significant reduction in night-time dog fouling. Using unexpected, disruptive message carriers/formats is proven to be a more effective messaging mechanism than traditional routes.

The campaign also tapped into the trend of narcissism and image consciousness brought upon by the social media age, where public image and perception is of upmost importance to people. Therefore seeking to highlight how littering makes them look to others.

The Reflective Litter intervention also practically applies Nudge Theory which influences decision-making of the target audience without altering their available choices. This approach has much evidence in generating behaviour change. We believe this approach to changing careful littering behaviour has

never before been tested and, if proven to be successful, has potential to provide a low cost, effective, and targeted solution to this problematic littering behaviour.

What did you do?

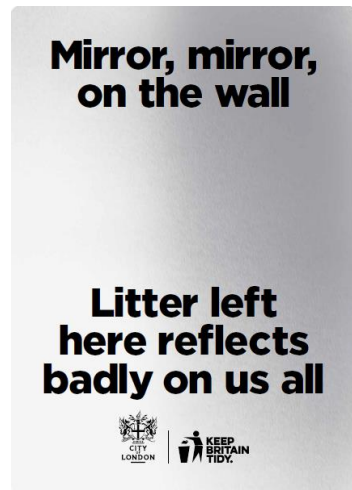
- How did you implement your project in reality? Please describe what happened during your project.
- Did anything change from your original plan, and if so, why? Did you encounter any problems or unexpected issues that might have affected your results?
- How did people react during the project?

To enable others to replicate your project, please include images of any key signage, posters, graphics etc. that you used, as well as photographs, maps or other essential information to show how interventions were deployed. Documents can be provided as appendices if appropriate. The information you provide should not be subject to copyright and should be able to be shared freely

The project was carried out as planned with the exception of a slight delay around the Christmas shut down period which spilled into January due to the extended annual leave of key project contacts. Subsequently the project was delayed by a total of 3 weeks, which was noted in the contract variation dated 12th December 2018.

The City of London corporation were recruited as an intervention partner due to the prevalence of the 'careful littering' issue in their locality, and their willingness to support the monitoring and match-funded value as required by the bid.

Keep Britain Tidy led on the development of the intervention material and messaging, but the final creative for the posters was approved by all parties. The final creative used in the trial was as below;



The creative utilised a well-known fairy tale phrase to capture people's attention and highlight the fact that the poster was reflective and to make the viewer seek their own image within.

The anti-littering message was kept short and sweet to allow real estate for the viewers face. The message highlighted the purpose of the poster to challenge littering behaviour.

Finally, the creative carries the Keep Britain Tidy and City of London corporations logo's so that people can see that the message is delivered in collaboration.

Initially the creative also carried an affirmative call to action to 'find a bin and put it in'. However this was removed after concern from stakeholders at the City of London that it might lead to criticism of the number of bins in the City.

Three locations were selected by the City of London for trialling the intervention. These were;

- Moorgate Metropolitan University
- Royal Exchange
- Cheapside near St Pauls Station

All 3 locations are high footfall inner city locations which are home to numerous convenience food retail outlets and attract food 'on-the-go' consumption.

It was agreed that 3 mirrored posters would be installed at each location to ensure that the messaging was frequent and easily seen. 9 posters were installed in total between the 3 sites.

Once the creative had been finalised, and prior to installation, comprehensive monitoring guidelines were issued to operators at the City of London corporation. These guidelines included an overview of the project, maps of the intended poster locations, and finally a clear framework for the litter count and LEQ grading including clear guidance and a template form.

Pre monitoring of the 3 designated areas then commenced on the 15.01.19. Monitoring was carried out every day at a consistent time (around 2.30-3pm) to fall in line with the existing post lunch cleansing routine. The posters were then installed on the 28.01.19, and the monitoring continued until the 12.02.19. In total the sites were monitored for 14 days pre installation and 14 days post installation.

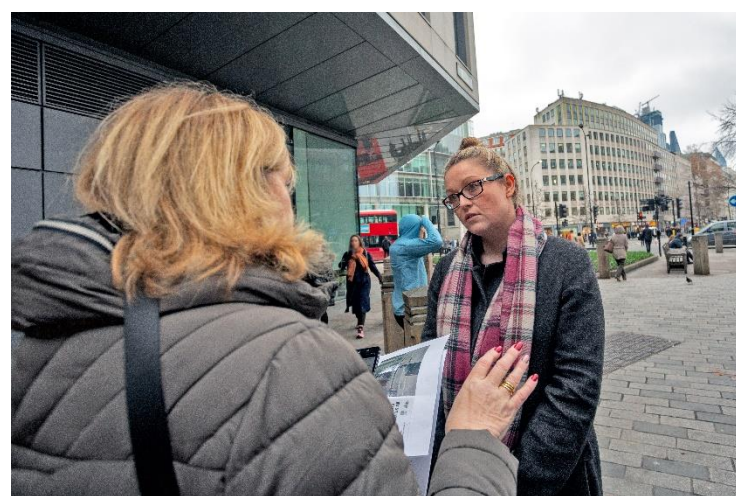
Running concurrently with the pre monitoring, Keep Britain Tidy worked with Feedback Market Research to develop a perceptions survey to be carried out at the 3 trials sites. This survey aimed to identify public views on the cleanliness of the areas as well as attitudes towards the intervention. 101 respondents were interviewed in total, the location split and research dates were as follows;

Moorgate and Metropolitan University 07.02.19- 26 interviews

Cheapside St Paul's on 5/2 with photographer plus 07.02.19- 50 interviews

Royal Exchange on 05.02.19- 25 interviews

Finally, Keep Britain Tidy carried out an interview with the City of London post the trial to gauge their feedback on the success of the trial and any improvements that could be made should the trial be extended or replicated.



All of the photos from the trial can be supplied on request if required.

How did you monitor your intervention?

Indicators:

- What indicators did you set out to monitor, in order to help understand if your project achieved its intended outcomes and aims?
- Were you able to establish a baseline, i.e. by collecting information on the original state of your indicators, before your intervention began?
- What were your intended indicators of success?

Indicators used to monitor the aim and objectives of the project were:

- A count of 'placed litter items' on each of the sites
- A 7 step LEQ grading assessing the overall cleanliness of the sites
- Perceptions of members of site users to assess their attitudes towards and awareness of the intervention

A baseline of the litter count and LEQ grading was established prior to the intervention being implemented for a period of 14 days. This monitoring was then repeated for an additional 14 days whilst the intervention was in place. A baseline was not collected on public perceptions in the area; we suggest that this was not necessary as the purpose was to understand attitudes towards and awareness of the intervention.

For the intervention to be deemed successful, it was intended that the intervention would a) show a reduction in placed litter b) show an improvement in overall LEQ grading and c) receive positive attitudes from members of the public towards the intervention.

Other influences and understanding causality

- How did you try to understand if any changes that occurred in your indicators were caused by your project, rather than other external factors?
- Were you able to identify and monitor a comparison or 'control' site?
- Describe the context and what happened during your intervention e.g. description of the weather, any events, any other campaigns (local or national), etc.
- What, if any, data/information did you record on external factors that may have influenced your data?
- How did you attempt to mitigate against them?

Other potential influences on litter at the site were identified via our data collection form (that was used daily with by those monitoring litter) and through an end-of-project interview with the delivery partner at City of London Corporation. Here, the partner discussed their interpretation of the litter monitoring result, and whether there were any factors which may have (positively or negatively) influenced the levels of litter at the site during the trial. The partner suggested that litter monitoring process accurately captured the amounts of placed litter left in the target areas.

As the intervention was tested in winter Jan-Feb, it was noted that the amount of lunchtime footfall was lower than would be expected in Spring and Summer months. Typically the problem of 'carefull littering' is much bigger in spring and summer when more people choose to meet and eat lunch outside. If we were to run the trial again we would definitely look to conduct the trial at a warmer time of year.

The monitoring was interrupted on the 31st January due to snow. On this day no monitoring of the sites was able to take place.

When monitoring littering rates, one of the key influencers of this tends to be footfall. In this instance footfall rates were not able to be measured as we did not monitor baseline litter placed in bins as this was not part of the cleansing operatives existing routine. However we did take measures to mitigate changes in footfall. For example the monitoring was origionally due to take place in early January and over New Years Eve. The start of the baseline monitoring was subsequently pushed back to mid Jan as it was felt that commuter levels of traffic would have stabalised by this point post the Christmas break.

As this project used a baseline phase, prior to the intervention being implemented, we suggest a control site was not necessary and therefore this method was not used. We suggest the baseline used for this trial gave a reliable comparison between littering levels in the two phases.

METHODS: Data sources and collection

- How did you source or collect the data/information to measure the indicators above?
- For each data source, set out at what points during the project you collected data (and why), and at what locations. Include information on the data you collected before your project began.
- How did you make sure data collection was consistent?

Information to measure the indicators above was collected via;

- A daily litter count was conducted to count the number of 'placed' litter items at each trial location
- A daily LEQ 7 point scale rating was given to each area prior to cleansing
- The count and rating were carried out at a consistent time every day (2.30-3pm) post lunchtime and prior to afternoon cleansing to fall in line with the existing operator routine.

Litter data to measure this indicator was collected by City of London Corporation's street cleansing operatives. Keep Britain Tidy provided operatives with litter monitoring guidelines including guidance on the 7 point LEQ rating, data collection forms and a spreadsheet for inputting data.

As litter monitoring was carried out by the same street cleansing team for the duration of the trial, this remained consistent throughout the monitoring month.

- Perceptions of members of the public at the target site
- Perceptions and attitudinal data was collected through 101 perceptions surveys with site users; 26 at Moorgate Metropolitan University, 25 at the Royal Exchange and 50 at Cheapside St Pauls. This survey collected feedback on the likely impact of the mirrors on littering behaviour. The surveys took 5 minutes to complete, and were carried out by an experienced market research agency, adhering to the Market Research Society's Code of Conduct, ensuring data collection remained consistent throughout.

OUTCOME: Results and Data Analysis

Please record all the information derived from the project, using appendices if appropriate. As set out in the Monitoring and Evaluation Guidance, please include any assumptions made or qualifications needed.

- Objective 1: Identify the impact of the intervention on litter

The litter count of placed items left at each of the trial locations showed that the trial delivered an overall average reduction of 19.5%, with 13.2 items littered daily on average before the trial and 10.9 littered daily on average during the trial.

With regard to performance at each location, Moorgate Metropolitan University was the only site that actually saw an increase in the average daily number of placed litter items during the trial. With a daily average of 6.5 items prior to the trial and a daily average of 6.6 during the trial.

This is in part skewed by a particularly bad day on the 31st January, which saw 22 items of place litter left at Moorgate. Excluding this day the daily average at Moorgate during the trial was 4.9 items and therefore a reduction of 24% from the pre-trial average of 6.5 items.

St Pauls delivered the biggest reduction in placed litter during the trial, from an average of 4.4 items per day pre-trial to 2.2 during the trial, seeing almost a 49.6% reduction.

	Count average pre trial	Count average trial		Reduction	Average
Moorgate	6.5	6.6		-2.3%	
Royal Exchange	2.4	2.1		11.2%	
St Pauls	4.4	2.2		49.6%	
Total	13.2	10.9		17.3%	19.5%

With regard to the LEQ grading, each site saw an improvement of +1 grading point during the trial;

			Pre Trial Grading Average	Trial Grading Average	Grading Shift
Moorgate			B-	B	+1
Royal Exchange			B	B+	+1
St Pauls			B	B+	+1

- Objective 2: Identify the impact of the intervention on perceptions of general public



Perceptions surveys were carried out at each of the 3 locations while the posters were in place. Although the research agency were briefed to conduct 75 interviews (25 at each location), 101 interviews were carried out in total. 26 at Moorgate Metropolitan University, 25 at the Royal Exchange and 50 at Cheapside St Pauls. 59.40% of respondents were male and 40.60% female. The age split was;

- 18-24 10.90%
- 25-34 30.70%
- 35-44 22.80%
- 45-54 17.80%
- 55-64 13.90%
- 65+ 4%.

When asked their purpose of visit to the area, 74.30% of respondents overall were primarily in the location for commuting to/from work. This was consistent at Moorgate where 69.20% of respondents were commuting for work, despite us originally expecting to capture a higher proportion of students at this location.

When asked, only 6.90% of respondents had noticed the poster before prompting. 91.10% had not and 2% did not know. However, of those who had noticed the posters before 85.70% could recall the message without looking again at the poster, responding as follows when asked what the key message was;

"Do not litter"
 "Don't litter"
 "It's about littering; it gives the area a poor image."
 "Making people feel guilty about littering"
 "It's about leaving rubbish"
 "Don't litter"

All respondents were then shown the poster again and then asked to comment on whether they agreed or disagreed with the following statements. The results were as follows;

- 61.4% agreed Litter from local food outlets (coffee cups, confectionary wrappers, sandwich boxes/wrappers) is a problem in this area
- 60.4% agreed that Litter from commuters (newspapers, cigarettes) is a problem in this area

- 58.40% agreed that Litter from lunchtime eating (food boxes, bottles, coffee cups) is a problem in this area
- 64.4% did not agree that it was easy to notice the posters in this area
- 71.30% agreed It was easy to understand what the posters were about
- 66.40% agreed that the message on the posters did make me think about littering
- 60.40% agreed that the message on the posters did encourage me to think about my own behaviour with regard to littering
- 64.40% did not agree that the posters would result in less food outlet litter in this area
- 55.50% did not agree that the posters would result in less commuter litter in this area
- 58.50% did not agree that the posters will result in less lunch-time litter in this area
- 63.30% agreed that reflective posters like these should be used in other areas to discourage litter

Finally the respondents were asked to give open feedback about the posters and how effective they might be. A sample of the responses given are below;

Negative;

“Too innocuous”

“Not eye catching, difficult to understand”

“Not easy to understand”

“You won't get the message, too reflective”

“If you are dyslexic you can't understand it”

“Can't see it, too reflective”

“Make the poster more visible. Blends in with the railings. Use more prominent colours”

Positive;

“Good idea, make you reflect on the message”

“Sublime message if you think about it”

“It's draws the attention as it is different from other normal posters”

“Get rid of litter. Gets to the point.”

“They look really good, it's a good message”

“It's a great idea, I like the message.”

“They should be placed everywhere.”

“Light hearted, clever.”

Whilst the litter count and LEQ rating improvements suggest that the posters were effective in reducing litter in each of the 3 trial areas, the perceptions survey showed a mixed response.

Many respondents did not notice the posters. This may be because they were difficult to spot, or it may be because the respondents had not been in the area previously. However as 64.4% disagreed that it was easy to notice the posters in this area this indicates the former.

Interestingly, when shown the posters, almost 70% agreed it made them think about littering, and 63% felt that the posters should be used in other areas. This is despite respondents doubting their effectiveness with most not agreeing that they would results in less fast food, commuter or lunch-time litter.

- Objective 3: Make recommendations for improving future iterations or scaling of the intervention

Feedback about the impact of the posters was also given by our contact at the City of London Corporation, who, during his partner interview, stated that the posters should be made larger and more impactful. Due to the mirror finish on the posters and their reflective nature they were actually quite difficult to see as they camouflaged very well with their surroundings. This camouflaged effect was unexpected and was echoed by the on street interviews and our photographer who found it difficult to effectively capture images of the posters.

During the partner interview our contact also stated that he felt that the posters should have been placed on ledges and planters rather than on sign posts as placed litter more often occurs on ledges and in planters. A different fixing solution would need to be developed to effectively use the posters in this way such as a stand/stake for planting.

Finally our partner also fed back that he felt that the intervention trial would be more insightful if held again in summer when more people eat outside at lunchtimes and therefore placed litter is more prevalent.

Overall, this trial was effective at reducing placed litter. However the research showed that the intervention could have been more impactful if the posters were significantly larger and more thoughtfully placed. Keep Britain Tidy would like to repeat the trial in spring/summer with bigger formats and a more impactful design (different colour lettering as opposed to white). A longer pre and during trial monitoring period and also a control site to more robustly test litter reduction.

Impacts and Evaluation - What did you learn?

- What were the outcomes against your indicators, and were they as expected? Please provide details of immediate, intermediate and long term impacts. Can you demonstrate that the outcomes would have been different if intervention had not taken place? Did any negative consequences arise? Which interventions, or aspects of your intervention, were particularly effective, and why?
- If outcomes/impacts were not as expected, it's useful to know why. Did you identify what factor(s) contributed to the project not working as intended?

- Volume of placed litter at the target sites and LEQ grading

The litter monitoring showed an average 19.5% reduction in litter during the trial across the 3 sites. It also showed a consistent +1 improvement on the LEQ 7 step grading system.

- Perceptions of members of the public at the target site

Whilst respondents were sceptical about the effectiveness of the posters, and many initially found them difficult to notice, the perceptions survey did reveal that 71.30% agreed it was easy to understand what the posters were about and 63.30% agreed that reflective posters like these should be used in other areas to discourage litter. Showing that in general the public are very supportive of local authorities campaigning to improve public environmental behaviour.

Again, larger posters and more impactful designs would be recommended should the trial be repeated.

Finally, the trial was unexpectedly successful in raising internal and external profile of the City of London Corporation's Environmental Services team. The trial was publicised in several local publications and also verbatim feedback from the partner was that it was well received internally and created a 'buzz'.

<https://www.charitytoday.co.uk/new-city-campaign-targets-careful-littering-hot-spots/>

<https://news.cityoflondon.gov.uk/new-city-campaign-targets-careful-littering-hot-spots/>

<https://www.citymatters.london/fines-littering-square-mile-set-shoot/>

<https://www.mylondon.news/news/south-london-news/mirrors-installed-london-grot-spots-15695528>

What would you do differently?

- What, if anything, would you do differently if you ran a similar project again?
- If outcomes/impacts were not as expected, do you think the factor(s) you identified as contributing to the project not working as intended could be overcome were the project repeated, and if so, how?
- What advice would you give to anyone else running this type of intervention?

Taking all learnings into account, Keep Britain Tidy make the following recommendations for any future iterations or scaling of this intervention:

- Adapt the design of the intervention to be larger and more impactful so that the design is easily spotted
- Consider more thoughtful placement of the design on ledges and in planters
- Consider an innovative method of affixing the posters to ledges and planters
- Retrial in spring/summer when litter caused by consuming food outdoors is more prevalent
- Trial for a longer period and also consider a control site to monitor against
- Explore complimentary campaign assets. How could the campaign be activated on social media? Snapchat/Facebook filters? Video? Viral messaging?

What did it cost?

Please provide details of your full project costs and contributions in kind (regardless of source), to enable others to understand the funding required to replicate your intervention. This could also include resource cost. Remember to include the costs of monitoring and evaluation. Be specific.

The project costs are outlined below in comparison to the original budget;

ITEM REF	DESCRIPTION	Original Budget			Actual Spend		
		TOTAL VALUE	GRANT CONTRIBUTION	MATCH-FUNDED VALUE	TOTAL VALUE	GRANT CONTRIBUTION	MATCH-FUNDED VALUE
1	Set-up, Project Management	£ 912	£ 912	£ -	£ 450	£ 912	-£ 462
3	Development and Delivery of the Intervention	£ 1,977	£ 1,977	£ -	£ 2,100	£ 1,977	£ 123
4	Data Analysis, Evaluation and Reporting	£ 912	£ 912	£ -	£ 1,200	£ 912	£ 288
5	Design costs and production including site visit	£ 6,117	£ 6,117	£ -	£ 6,442	£ 6,117	£ 325
6	Pre, during and post monitoring	£ 1,102	£ -	£ 1,102	£ 5,480	£ -	£ 5,480
		£ 11,020		Total	£ 15,672	£ 9,918	£ 5,753

In summary, £10,192 was spent by Keep Britain Tidy in delivering the Intervention against the original budget of £9,918. This spend consisted of £4,762 of external costs and £5,430 of internal costs.

£5,480 of in-kind match funded value was also given by our partner the City of London Corporation, against an original budget of £1,102. A significant overdelivery on the original amount of investment anticipated. This overspend was largely as a result of testing the intervention at 3 trial locations as opposed to 1 location as original envisaged to ensure the robustness of the trial findings.

In total the project cost **£15,672** against an original budget of £11,020.

If someone was hoping to roll-out this solution the costs above could be significantly reduced if the creative and monitoring framework all remained as current. In this instance the only external cost would be for print of the posters (£1,690 for 20 x A3 posters) and also the cost of staff time for location selection, installation and impact monitoring (should someone look to include this as part of rolling the solution out).

Next Steps

Based on what you have learned:

- How are you planning to build on the activity yourselves?
- If the project was successful, how could/should this intervention be replicated and/or scaled up by you or others?
- If the project was not successful, how might it be changed to potentially deliver better results?
- What further research or refinement is needed?

Keep Britain Tidy now plans to seek funding to further add to this evidence base, for instance through undertaking an additional trial during the spring/summer months, using larger and more impactful posters.

In the meantime, Keep Britain Tidy will also look to survey their local authority network members to see if there is any market demand for this solution in it's current guise given the positive trial results. If there is, Keep Britain Tidy will look to offer the solution as a 'campaign in a box' to network members.

Due to the low cost and practical nature of this intervention, we believe that if future trials demonstrate a reduction in littering behaviour, it has great potential for scale.

Is there any other information you wish to share ?

e.g. Any media regarding the project, correspondence with those affected by intervention, or anything else of relevance.

No.

Feedback to us

Your feedback is important to us. We would be grateful for any comments on (or recommendations for future) Litter Innovation Fund management and materials:

Reflecting on the whole process, we can provide the following feedback and hope it's useful:

- The process seems very formal and bureaucratic. We appreciate that there will be certain requirements and stipulations for grant recipients, project delivery and documentation of how the grant was used, etc. There was lots of paperwork to read, which felt daunting and overwhelming. It



contained lots of legal/contractual jargon which made it quite difficult and time consuming to read – which seemed at odds with the size of grant being delivered.

- We felt that the budgets available within the fund were quite small which significantly limited what we could deliver and achieve. Perhaps awarding fewer projects with larger budgets might generate more useful insights and provide greater opportunities to get more successful projects scaled quicker.
- The final report template felt quite repetitive, and for the type of projects that we were using it for, we were often documenting the same kinds of information in the different boxes/sections. Similarly, some of the information required in this form was also felt to duplicate information we submitted at the beginning of this process (e.g. project plan). We appreciate that there may be good reasons for this and so perhaps this might be unavoidable.
- In terms of using the insights generated from all the projects awarded by the fund, perhaps a two page case study of each project would be beneficial and more useful for dissemination than the full detail outlined in this form.
- The team at WRAP were on hand and were helpful and a good support.