

Litter Innovation Fund (LIF)

LIF Reference Code	ENG102-009	Date	5th October 2018
Organisation Name	St Edmundsbury Borough Council	Completed by	Andrew Harvey

Project Abstract

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

The maximum grant of £10,000 was match funded with a combination of officer time and local funding giving an overall project budget of £23,000.

The aim of the project was to test a combination of measures over several months to determine how they would affect the amount of litter being deposited in 18 trial layby locations across the county of Suffolk.

The measures included:

- Increased awareness through an educational campaign using signs, banners and a targeted advertising campaign
- Increased number of litter bins (Newly designed bins and sites with additional bins)
- Monitoring of litter bin fill levels using remote monitoring devices

The remote devices have reduced the percentage of bins which had reached over 90% fill rate before being emptied therefore reducing any littering issues from overflowing bins. However, overall service efficiency did decrease slightly over the two phases of monitoring.

All trial locations with extra litter bins maintained acceptable grades of litter for a longer period of time than they would normally and had lower amounts of litter at the end of the trial when compared to the control trial laybys.

Litter counts at the end of the project were:

Control locations - 5240 Additional locations - 2478 New locations - 3315

- Litter counts at control sites were 58% higher than at sites with new litter bins
- Litter counts at control sites were 111% higher than at sites with additional litter bins

There are elements of the project which can be scaled up:

- A standard minimum number of litter bins in a layby could be set dependant on the usage and/or size of a layby with bins having certain standard specifications for visibility and capacity.
- Remote devices could be installed in more isolated litter bins and those which have a high usage so that a more fluid schedule could provide improved efficiency in emptying and a reduction in overflowing bins.
- A widespread educational campaign would be more prohibitive due to the cost if using similar advertising methods, this maybe something that would need national funding or a similar targeted approach to use more permanent signage at hot spot locations. Standard signage and banners could easily be used at a lower cost and at more widespread locations so that the brand message is more visible and reinforced.

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.

Littering is a blight which negatively impacts on the health, safety and happiness of Suffolk residents and visitors alike. Its removal from Suffolk's A-roads, specifically the A11, A12 and A14, costs local taxpayers approximately £300,000 per annum. Litter is also a high profile and frustrating issue for local people and regularly receives local press coverage.

The project therefore aimed to tackle this issue of roadside litter, which was deemed to be the most high profile litter related issue and the easiest to monitor as a selection of trial layby locations would be chosen. The trial locations would be monitored on a weekly basis to Local Environmental Quality Standards (LEQS), where possible this will take place on the same day and at a similar time.

The trial objectives were:

- Increased capacity results in decreased litter (standard or newly designed litter bins)
- Trial sites will remain at an acceptable standard (A or B grade) for a minimum of four weeks from the baseline
- Control trial sites will remain at an acceptable standard (A or B grade) for two weeks from the baseline

- The number of items of litter (at the end of the trial) will be 70% higher at control trial sites than at the trial sites with newly designed litter bins
- The number of items of litter (at the end of the trial) will be 50% higher at control trial sites than at the trial sites with increased standard litter bins
- The number of items of litter at all trial sites will be maintained during weeks 5, 6, 7 and 8 (phase 2 of awareness campaign)

The aim of the project was to see a reduction in amount of litter at the trial locations through a change in littering behaviour and a reduction in the negative impacts of overflowing litter bins. This should be a long term impact through the campaign changing the behaviour of the target audience and making litter disposal easier by providing more litter bins.

Increased litter bin capacity and changes to litter bin type should lead to an increase in the amount of litter actually being placed within the litter bins and could be an immediate response to this change. If successful and more litter bins means less litter then keeping the additional litter bins in place would be a long term positive impact.

Remote monitoring of these should eliminate any overflowing issues, preventing littering as more waste goes in the bins and less on the floor. This will be an immediate change as real time data will be provided to prevent any future overflows and could be a long term solution if litter bins are fitted with such remote devices to monitor their fill levels.

Targeting motorists with the same brand message, across the county will raise awareness and reduce littering from vehicles, this will probably be an intermediate change. As the number of banners and signs increases and the campaign gains momentum it is likely to be more widespread and more visible. The behaviour patterns will take time to change, this will be a slower process but reinforced by the consistent message across the county. To have a long lasting response the campaign may need repeating at regular intervals so that the message stays fresh and motorists are reminded.

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 8 Suffolk Local Authorities work collectively through the Suffolk Waste Partnership (SWP), a sub-group of this partnership is the Suffolk Fly-Tipping Action Group (STAG). This group working on behalf of the Suffolk Waste Partnership wanted to target the amount of littering on our main roads.

The campaign activities were:

- **Improved Communications** - A unique campaign, using banners, posters and advertisements deployed at roadside locations including petrol stations, fast food restaurants and service areas. This campaign was designed to raise awareness and nudge road users towards more responsible behaviours. The campaign was split into 2 specific strands:

1 “Keep Suffolk Beautiful” Campaign - A personalised, softer message to keep the county looking its best by reinforcing the message to bin litter or take it home.

2. “Watching Eyes” Campaign - A high impact “watching eyes” design was employed to suggest heightened surveillance and outline the financial penalties that can result from littering. This approach had already been successfully tested elsewhere (Keep Britain Tidy) and resulted in a 23% reduction in motorway littering

- **New Bin Designs** - New attractive roadside litter bins with a wide funnelled opening were designed and built. This was aimed at allowing road users to successfully throw litter into the bin whilst remaining in their vehicles. This design had already been successfully trialled elsewhere by Highways England but was adapted for Suffolk to reduce manual handling during

emptying by using wheelie bins and to work with our existing collection infrastructure. These new bins were clearly marked with reflective litter symbols to ensure their visibility to road users 24 hours a day which aimed to make it clear where facilities exist and provide a clear reminder to road users on how to appropriately dispose of litter.

- **Increased Bin Numbers** - At specific high-volume laybys, additional bin facilities will be introduced to allow more road users closer access to a bin so that there is minimal effort required for them to correctly dispose of their litter.
- **Remote Monitoring Technology** - both new and additional bins were fitted with remote monitoring systems to relay information to an online hub in real time. The system emailed an automatic alert to notify operations teams when bins required emptying reducing the risk of overflow. This is a proven technology widely used for other waste operations and provided vital data on site usage and any seasonal variation in the demand and use of the litter bins.

The project plan included:

- 1 Produce template letter to businesses who will be potential partners
- 2 Create list of businesses/partners and send initial letter of campaign idea
- 3 Develop signs and banners for awareness campaign
- 4 Ensure standard litter bins in stock ready for installation
- 5 Place order for devices
- 6 Place order for trial litter bins
- 7 Place order for promotional materials
- 8 Place order for advertising space
- 9 Develop campaign launch and social media
- 10 Trial location monitoring (including two-weeks pre-trial monitoring)
- 11 Install trial devices to bins

- 12 Install new bins at trial locations
- 13 Trial location monitoring (start of eight-week monitoring)
- 14 Campaign launch (press release)
- 15 Start of eight week promotional campaign
- 16 Start of four week paid-for advertising campaign
- 17 Start of weekly tweets and posts via social media
- 18 Trial location monitoring (start of two-weeks post-trial monitoring)
- 19 Removal of trial devices
- 20 Review and remove any signs and banners no longer to be displayed
- 21 Evaluation and review of project

Project Staffing

A team of six officers from the county and district and borough councils selected 'hot spot' locations within their areas, using their local knowledge, to use as trial locations for the project. Three separate trial layby types were chosen by each district or borough, one for the installation of new bins, one for additional bins and one control layby where no changes would be made. They monitored the locations before, during and after the trial phases of the project to ensure that the monitoring was consistent.

These officers committed to providing this resource in addition to their normal duties as a countywide littering campaign is seen as beneficial as well as being connected to the job role of those involved. As the trial locations were spread across the county each officer had a share of sites to monitor making it less of a burden on any one individual.

The overall managing of the project was undertaken by St Edmundsbury Borough Council, coordinating the overall process of purchasing equipment, placing orders and ensuring consistency.

The emptying of the additional bins at trial locations was incorporated into current local collection schedules where litter bins were already being emptied. The trial locations also required no scheduled litter picking throughout the trial after an initial clearance at the start of the monitoring period.

Part of the awareness campaign was handled by a marketing company who advertised on petrol pumps; the locations were selected by the team of local officers who had the knowledge of whether they were appropriate or not.

The aim of the project was to see a reduction in the amount of litter at the trial locations through a change in littering behaviour and a reduction in the negative impacts of overflowing litter bins. Key project expectations included:

- Increased litter bin capacity and changes to litter bin type should lead to an increase in the amount of litter actually being placed within the litter.
- Remote monitoring devices will eliminate any overflowing issues, preventing littering as more waste goes in the bins and less on the floor. This will be an immediate change as real time data will be provided to prevent any future overflows and could be a long term solution if litter bins are fitted with such remote devices to monitor their fill levels.
- Targeting motorists with the same brand message across the county will raise awareness and should reduce littering from vehicles, behaviour patterns will take time to change but should be reinforced by the consistent message across the county.

What was innovative about this project?

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

The project was mainly expanding on individual ideas and approaches which had been used in isolation in other locations but not used in combination and monitored so that information could be gathered on the effectiveness of these measures. The use of remote devices is still fairly new and the project enabled the effectiveness of using this technology in more remote locations to be tested.

The use of different types of bin; one brightly coloured orange with an opening for litter to be deposited without the need to touch the actual bin and the other a standard lock-down frame with a wheelie bin where the lid needs to be touched to open and deposit litter. This was aimed at measuring any connection between the amount of litter and the type/design of bin available at that location.

A targeted litter advertising campaign was something that had not been tried locally for many years and this was designed to send a message to keep the local area clean, connecting with people living in the area and also sending a harder message that fines could be up to £150 for the offence. Both the softer and harder messages were designed to try and nudge a change in people's behaviour.

Overall, the project aimed to provide a package of measures to balance education, enforcement and having the right provision of bins in place so that people had an option to dispose of their litter correctly. An increased number of litter bins, not overflowing as fill levels were being monitored, and an awareness of the penalties involved for littering aimed at creating this balanced approach.

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 remained true to our original plan with the only changes to the timescales involved due to the delays in receiving equipment from suppliers. The litter bin housings were newly designed so there was a slight delay in getting them delivered and installed which meant that there was not sufficient enough gap to monitor any impact of the pre-booked advertising slots before they were installed. The advertising campaign had been booked and could not be altered and manufacturing delays meant that both the new litter bin installations and the start of the campaign happened at the same time.

One location for a new bin had to be changed as installation could not take place as a suitable base could not be installed. Consequently, pre-trial data for its new location was not available although it was a known local 'hot spot'.

The remote monitoring of the litter bins also had to be extended as there were delays in getting the supply of remote devices and issues with their activation due to some council IT restrictions making it difficult to download the necessary software. Some partner authorities were unable to extend this period so there are two incomplete sets of monitoring for these trial locations.

The signs and banners had no contact details or council endorsements such as logos on them; this was deliberate so that the message was the important element and not who it was coming from i.e. the local council. It was hoped that people would be more receptive to this approach and would change behaviour by wanting to live somewhere without litter not because the council were instructing them not to litter.

There was not much public feedback although two press releases went out during the campaign and did receive considerable media attention including interviews on local BBC radio. There were requests for signs from some local parish councils who had seen the images and had similar littering issues on main roads running through their villages. Some local businesses were hesitant in displaying banners without a council logo on them as they did not want it implying that they were the ones imposing the £150 fine to any offenders. Council stickers were placed on banners at the few locations where this issue was raised. The overall response from local businesses was disappointing, these businesses were specifically targeted for being connected with littering issues and having an interest in participating.

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?

There were two main indicators to measure and monitor litter during the project; grading of litter using the LEQS standards from grade A to grade D and the amount of litter physically counted/observed at trial layby locations. These locations were also monitored in the weeks before any changes took place so that pre-trial data for the sites condition prior to any changes taking place could be recorded. After the new and additional bins were installed a final litter pick of all of the trial layby locations including the control laybys took place so that a baseline of grade 'A' standard was set in all trial laybys. All locations were effectively reset to a grade 'A' standard, free of litter; the intended indicator of success was to reduce the amount of litter deposited at these trial locations and maintain the acceptable standard of grade 'A' or grade 'B' standard for as long as possible. It was assumed that the new bins would perform slightly better than sites with additional bins and that the control laybys would only maintain an acceptable standard for two weeks. Any prolonged reduction in litter and extension of maintaining acceptable grade levels for longer was intended as a success for the project.

The remote devices gathered data over the first phase after their installation; the second phase involved using the historic data collected and analysing the real-time usage of the litter bins to send out an alert when a fixed fill level of 75 % had been reached and maintained for at least one hour. This was intended to increase the fill levels of litter bins so that they were emptied at the optimum time before they were full and overflowing, reducing any possible litter from overflow and increasing operational efficiency.

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?

The control laybys were chosen to be similar to the trial laybys where additional bins or new bins were installed. All trial site locations in each district and borough were to be monitored on the same day and at a similar time; where possible the same person undertook the monitoring. There were potential changes in the amount of litter due to the weather and in instances where items of litter moved on or off site due to wind, monitoring officers were told to mark just litter and nothing which was fly tipped or had potentially not been derived from littering.

The educational campaign ran alongside the monitoring of the trial locations. No other campaigns took place during this time, which was the peak season for people travelling and potentially using the trial layby locations. During an abnormally dry period the weather was mainly dry and sunny and therefore would have if anything provided the conditions for more litter to be generated along with more vehicle movements around the county. Details of the weather were noted on monitoring logs along with any other unusual items found. The weather was mainly hot and sunny which would tend to increase the traffic on the roads and potentially the amount of litter being produced, there were a few incidents of fly tipping at trial locations and in one of the newly designed litter bins.

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?

In the 2-3 weeks prior to the trial going live, all trial locations were monitored so that a pre-trial record of the amount of litter and grades could be recorded.

During the monitoring period, site visits were made at similar times of the day and on the same day each week during the monitoring period where possible (excluding Bank Holidays, where monitoring was a day later) in order to maintain consistency. The trial locations received no further cleansing during the monitoring period and no results were shared until after the end of the trial.

The weekly trial monitoring was completed to Local Environmental Quality Standards (LEQS), grading from A to D in accordance with the Code of Practice on Litter and Refuse (COPLAR). At the same time an observational litter count was conducted at each trial location to ensure that only litter deposited at the actual trial site was being recorded. Monitoring officers separately recorded items that they believe are not litter. This included:

- Vehicle parts i.e. shredded tyres
- Fly-tipped waste i.e. pallets
- Wind-blown items i.e. packaging

The data compiled by FarSite, the suppliers of the remote devices, was independently gathered through the devices. The data was then sent directly to the online hub, the only variation was after the initial period of 4 weeks data collection when the alert system was not switched on so that historic data could be recorded. After this period the alerts were switched on and the litter bins with devices were only to be emptied after an alert had been sent indicating the pre-set fill level of 75% had been reached for at least an hour. This allowed for any variations in the properties of litter being deposited i.e. light packaging being compacted by a heavier bag of litter.

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.

Inserted below is the results spreadsheet which outlines the amount of litter and the grade of litter for each monitored trial location and graphs showing the weekly litter count results for the control, additional and new bin locations:



Results
Spreadsheet.xlsx



Graphs.docx

Device Summary (All Locations)

The device results are for two phases. The first phase (02/07/18 - 07/08/18) was when historic data was compiled and no alerts had been enabled so that emptying operations continued as normal. During the second phase (08/08/18 - 02/09/18) the alerts were enabled and emails sent out when the fill level had triggered them.

	02/07/2018 – 07/08/2018	08/08/2018 – 02/09/2018
Service Efficiency (%)	69.06%	62.73%
Unused Capacity (%)	21.13%	34.94%
Total Collections	182	181
Total Collections (Under 50% Full)	41	61
Total Collections (Over 50% Full)	141	120

Days Bin Full (Over 90%)

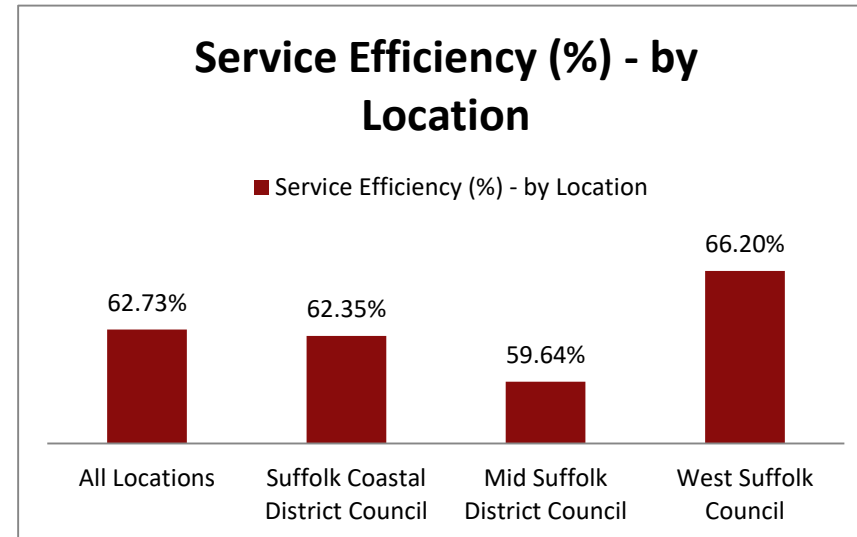
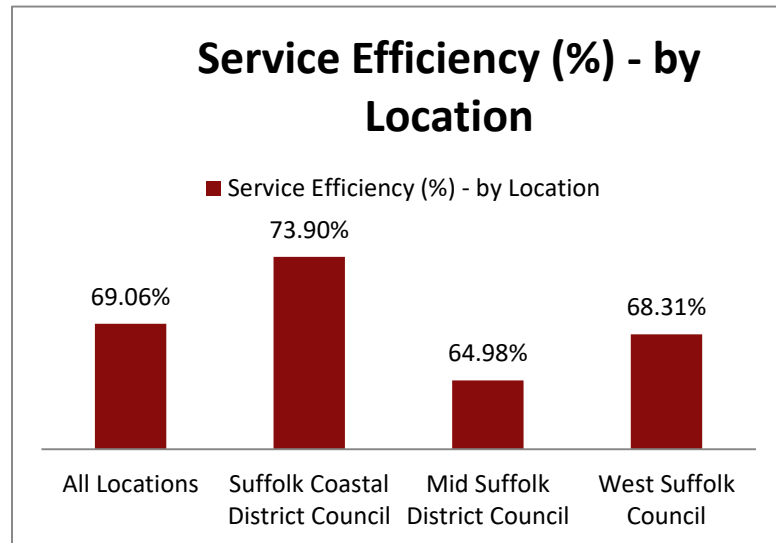
14.72%

3.78%

The service efficiencies for the individual councils involved and overall efficiencies are recorded for both the first and second phases in the graphs below:

First Phase

Second Phase



Summary of Device Results

- Service efficiency decreased by 6.33%
- Unused capacity increased by 13.81%
- 48.78% increase in bins emptied with under 50% fill level
- 14.89% decrease in bins emptied with over 50% fill level
- 10.94% decrease in days bins were over 90% fill level

Overall service efficiency decreased slightly which also resulted in a 48.78% increase in the amount of bins being emptied with an under 50% fill level and an increase in unused capacity of 13.81%.

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?

The indicators and outcomes have been fairly mixed:

- **Increased capacity results in decreased litter (standard or newly designed litter bins)**

Yes, overall the increased capacity reduced litter. This has been backed up by anecdotal information from operational crews as well as the data from the litter counts.

- **Trial sites will remain at an acceptable standard (A or B grade) for a minimum of four weeks from the baseline**

Yes, the majority of sites maintained an acceptable standard for four weeks

New - 5 out of 6

Additional - 4 out of 6 (1 failed all grades)

Control - 4 out of 6 (1 failed all grades)

- **Control trial sites will remain at an acceptable standard (A or B grade) for two weeks from the baseline**

4 out of 5 sites maintained for two week, 3 out of 5 sites for 4 weeks

- **The number of items of litter will be 70% higher at control trial sites than at trial sites with newly designed litter bins (at the end of the trial)**

The amount of litter was 58% higher at the control sites, although not at the level predicted it was still a significant difference in the amount of litter between the sites.

The new bin were installed at the busier locations but were still able to reduce the amount of litter that was counted at similar like for like locations.

- **The number of items of litter will be 50% higher at control trial sites than at trial sites with increased standard litter bins (at the end of the trial)**

The amount of litter was 111% higher at the control sites which was over double the expected amount and a very significant difference in the amount of litter between these sites although some sites were not as busy as the new bins/control site locations.

- **The number of items of litter at all trial sites will be maintained during weeks 5, 6, 7 and 8 (phase 2 of awareness campaign)**

It was not possible to identify any significant reduction in litter levels during phase 2 due to the following issues:

1. A delay in the delivery of litter bins prevented installation prior to the commencement of the awareness campaign
2. It was not possible to alter the commencement date for the awareness campaign.

The indicators were all proven over the monitoring period, some of the results for the trial sites varied as we had a mixture of locations across the county. The sites with additional litter bins also performed better than the new litter bins when compared to the control locations; some of the sites for additional bins were not as large as some of the sites for new bins so results may have varied due to the differences in use of these laybys. The new litter bins were open, more brightly coloured, with signage on them so it was assumed that they would outperform the sites with additional litter bins which were wheelie bins with closed lids and no signage on them. It is encouraging that both types of litter bin resulted in a reduction in the litter count when compared to the litter count of the control locations.

Devices

Overall service efficiency levels were fairly high in the first period of collecting data as collection crews have become used to having their own local knowledge and schedule of emptying bins. It is also difficult to change operational habits in such a short period especially at locations which are being regularly driven past by operational crews.

The number of days bins where bin fill level exceeded 90% decreased once alerts had been enabled. This result in a reduction in overflowing bins and subsequent littering at trial locations. The information on fill levels gives an independent and real time view of litter bin fill levels.

Some operational crews tended to stick to their routine schedules and in some other areas crews emptied bins as they were nearby, despite the instruction to only empty bins in the second phase once an alert had been received.

Remote devices give real-time information and can potentially eliminate overflowing bins if there is operational flexibility. They can be most beneficial in more remote locations but could also increase efficiency if used correctly across a more concentrated litter bin network. A full or partial permanent installation of devices would require more control by supervisory and managerial staff to change behaviour and work patterns of operational staff.

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?

If working across agencies or in partnership, I would seek commitment from senior officers first to ensure operational staff are committing the time necessary to fully implement the project.

Consider any trial locations and make them as similar as possible. This may be better for direct comparison of results as there was a difference in size and the use of some trial locations which could make the results slightly different. It is difficult to find a number of similar locations within close proximity for officers to easily monitor without spending too much time travelling. That said, some of the trial locations were close together and/or on opposite sides of the same road. Some control sites were nearby so experienced similar amounts of traffic passing by but were not always the same size and therefore the number of vehicles which could use them would be less.

Greater time and emphasis needs to be committed to secure support from local businesses. It was frustrating that not as many businesses got involved or even responded to letters sent.

Several national brands endorse and promote national litter reduction campaigns. However, being able to contact the right people within organisations is key and at a local level this proved difficult. As a result, businesses were less engaged with local council activities and campaigns.

Securing adequate budget support is vital if campaigns are to make an impact. Whilst beneficial, the project budget wasn't enough to make a sizeable impact given the scale of the challenge. This is particularly highlighted where local resources are stretched.

Different measures would seem to have different results at the locations monitored. It is best to know who you are targeting as the message and infrastructure needs to reflect the audience it is aimed at, in this case road users and more specifically those using laybys on main routes.

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.

New and Additional Litter Bins

£5,460 New bins (15)
£2,400 Additional bins (10)

Advertising & Education

£4,840 Supermarket petrol pumps (14 sites for 4 weeks)
£2,591 Vehicles with side advertising (5 refuse collection vehicles and 3 mechanical sweepers)
£1,425 Banners
£740 Correx signs

Devices

£1,288 Hire of remote devices (46 devices for 2 months)

Officer Time

£2,125* Meetings, planning and monitoring
Weekly monitoring over the trial period took the majority of officer time.

*There is probably an under estimation of the time taken to manage and coordinate the project as many hours have been absorbed with other duties, (5 hours a week over 15 weeks so an additional 75 hours and additional cost of £1,125 cost)

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?

The project has proven that with sufficient litter bin provision the amount of litter can be reduced. We will further consider the data produced and seek approval from political leads to develop a local litter strategy. Any decision will be based on the operational benefits and budget savings possible should this project be rolled out in other areas of Suffolk.

We are already investigating options for a local communication network. This approach could allow remote devices to be installed in a wider number of our litter bins. Currently such a scheme is prohibitive due to monthly connection costs but by setting up a local network we hope costs will reduce and savings will be generated through increased operational efficiency.

Better partnership working is needed if Local Authorities are to effectively reduce litter. Highways England need to be more closely involved in designating narrow laybys for emergency use only and assisting councils in being able to install enough litter bins and adequate signage in larger laybys without significant costs.

The project has proved that improved litter bin provision results in reduced littering. If we can increase litter bin provision, litter blight could be further reduced, especially if coupled with better maintenance of roadside vegetation which often traps or hides the extent of littering. Making it more obvious when someone has littered will make a lot of people think twice, people are less inclined to litter in an area which is fairly litter free whilst it is easier to add more litter to somewhere which is already significantly littered. Having enough litter bins provided, especially big, bright orange ones in main road laybys gives people the opportunity to see a bin and do the right thing.

Further Research

During the project, significant amounts of litter continue to be deposited near or next to litter bins. More research on open bins/bins with lids could be conducted to see if there is any link between people having to touch a lid on a bin to open it and more litter actually being dropped nearby.

Investigation could take place into the closure or restriction of access on smaller laybys to all vehicles making them for emergency vehicles only or for use in an emergency only – i.e. breakdown only. Many laybys are too small or narrow to accommodate litter bins, the option is therefore to limit the use of these laybys in order to prevent litter being deposited.

A large amount of roadside litter, much of which is of an unpleasant nature, is being discarded by lorry drivers who have no other facilities to use due to a shortage of provision in designated lorry parks. Investment is needed in proper and more frequent facilities to prevent overnight parking in laybys where littering is commonplace although litter bins are provided.

Technology could be trialled to see if it would help in using CCTV cameras to monitor hotspots in laybys or along roads would reduce littering. This could also be tested at narrow laybys with no space to install litter bins, using warning signage and CCTV to monitor compliance.

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.

County Highways had several requests for campaign signs to be installed in litter 'hot spots' by roads.

The support from several local businesses was less than anticipated with regards to committing to displaying signs or banners, there was some apprehension over one of the images used (eyes watching) and the inclusion of the wording of a fine of up to £150 on the promotion materials. Some viewed this as not very customer friendly and did not want to display such messages which may have upset their customers.

Some feedback was received indicating that, as the promotional materials did not state that it was the council who would be imposing any such fines, they did not want to be associated with it and the potential negative feedback or response from customers.

Various links to media articles and online press releases:

<http://www.eadt.co.uk/news/suffolk-gets-cash-to-fight-road-litterbugs-1-5436360>

<http://www.eadt.co.uk/news/funding-to-tackle-litter-on-suffolk-s-roads-awarded-to-st-edmundsbury-borough-council-1-5451532>

<http://www.eadt.co.uk/news/suffolk-councils-eye-new-measures-to-tackle-roadside-littering-1-5638103>

<http://www.becclesandbungayjournal.co.uk/news/beccles-lay-by-litter-bins-1-5591404>

<http://www.becclesandbungayjournal.co.uk/news/suffolk-roadside-litter-1-5620765>

<http://www.lowestoftjournal.co.uk/news/suffolk-waste-partnership-trial-litter-campaign-1-5546696>

<http://www.eastsuffolk.gov.uk/news/smart-litter-bin-trial-starts-in-suffolk/>

https://www.westsuffolk.gov.uk/bins/street_cleaning/suffolkagainstlitter.cfm

<https://www.haverhillecho.co.uk/news/grant-to-suffolk-will-fund-trial-of-litter-bins-that-call-when-full-1-8434057/>

<http://www.eadt.co.uk/news/suffolk-gets-cash-to-fight-road-litterbugs-1-5436360>

<http://www.greensuffolk.org/recycling/waste-news/please-empty-me/>

<https://www.babergh.gov.uk/news/please-empty-me-smarter-system-for-litter-bin-emptying-trialled/>

<https://www.suffolk.gov.uk/council-and-democracy/council-news/show/suffolk-waste-partnership-trial-litter-campaign-starts>

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:

From the trials being conducted it would be good to have a series of national/regional workshops to promote the various campaigns and share learning, challenges and solutions. Some best practise documentation detailing what has or hasn't worked would also provide officers with practical assistance.

The transfer of responsibility (using existing legislation) for major trunk roads such as the A14 (the main connection to and from the Port of Felixstowe) to the Secretary of State would enable a more cohesive and strategic approach to such roads which pass through numerous districts and boroughs. The current arrangement makes it difficult for members of the public to tell who has responsibility for which section of road as they often pass in and out of district/borough boundaries and who they should complain/report issues to.

Working with Highways England can also be costly and difficult to co-ordinate, for example when installing new bin infrastructure or litter picking on trunk roads. A standard set of procedures for all layby locations under a single agency would enable standard litter bins or signage in a layby to state it is for emergency use only. Highways England have the infrastructure to enable more efficient working practices along the network of roads they currently maintain.

Some local authorities provide bins in their laybys, some provide nothing or have the minimum of a wheelie bin just placed in them for motorists to use. This mixture can create confusion for motorists and is often expensive for local authorities to provide adequate facilities with no additional maintenance budgets. This issue is particularly pronounced on busier roads where no specialist support vehicles for traffic management and no technical knowledge of working exists.

Their needs to be a re-evaluation about the pressures facing Local Authorities and how Government can help Local Authorities tackle highway littering. Whilst the increase in fine level to £150 is welcome, shrinking budgets make it difficult to prioritise litter enforcement above other statutory service requirements. Further assistance from Government would therefore be welcome as this encourages Authorities to prioritise this issue and establish new cost effective processes.

In addition, more needs to be done to understand if certain groups of road users are more likely to litter than others, what drives this behaviour and what measures can be taken to address this.