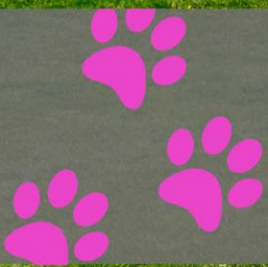




Tackling dog fouling through social marketing:
a trial by Keep Wales Tidy



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Over several years, Keep Wales Tidy has undertaken many educational and awareness raising initiatives, as well as lots of practical improvement projects with volunteers in communities across Wales. This year, building on initiatives that have been undertaken in Wales and further afield, we decided to combine these elements, using principles of social marketing and other behavioural change techniques in a trial funded by the Local Environmental Quality Branch of the Welsh Government.

The problem

Despite much effort by many partners, dog fouling continues to be a problem in Wales:

- Our street cleanliness (LEAMS) surveys show that on average, dog fouling is present on **12.3%** of streets Wales wide.¹
- The Welsh public considers dog fouling the environmental problem which has the greatest impact on the look and feel of a neighbourhood.²
- Dog fouling is one of the biggest complaints to councils³ and politicians⁴.

Even though most dog walkers pick up after their pets, a minority continue to leave it, and in doing so, danger the lives of people⁵ and dogs.⁶ Others bag the waste, but then leave it on the ground or somewhere nearby. With no recognised blanket solution to the issue, we decided that this experiment would focus on dog fouling.



¹ Keep Wales Tidy (2016) 'How Clean are our Streets? All Wales Local Environmental Audit and Management System Report 2015-16'.

² Keep Wales Tidy (2010) 'Litter in Wales Understanding Littering and Litterers Executive Summary Report'.

³ Website: <http://www.bbc.co.uk/news/magazine-22853270> (Visited: 08-01-16).

⁴ Website: <http://www.theguardian.com/news/blog/2009/feb/11/dog-fouling-britain> (Visited: 08-01-16).

⁵ Website: <http://www.keepwalestidy.org/news/153-dog-owners-need-to-take-responsibility> (Visited: 09-02-16).

⁶ Website: <http://barcproject.wix.com/barcproject#!barc-science/-c1hms> (Visited: 22-03-16).

The experiment took place across Wales, using three park/public open space locations, one in each region.

We selected local authorities where dog fouling was identified as an issue in our street cleanliness surveys, as follows:

- South East: **Blaenau Gwent**
- South West: **Bridgend**
- North: **Conwy**

Project officers in these areas chose a location based on their knowledge of local dog fouling issues and sought permission from the local authority to do the experiment there, ensuring also that local authority staff would not divert enforcement or cleansing resources to the area during the time, or at least not more than usual (as this would affect the results).

Method

The purpose of the experiment was to change negative behaviour associated with dog fouling by using the nudge technique, i.e. influencing people through positive reinforcement. Two nudge interventions were used:

1. **Chalk-based spray:** paw prints with a message sprayed at the end of them (leading to a bin, if one is present). Footprints to bins have been used to successfully change littering behaviour in Wales⁷ and beyond⁸.
2. **Signs:** using a message in a prominent place. Signage has been used during environmental improvement projects by volunteers supported by the Tidy Towns initiative and has been noted as being effective.

‘Bag it and bin it’ is a common and easily understood message in dog fouling campaigns, however Keep Wales Tidy recognises that it is impractical and expensive for local authorities to provide bins (whether general litter bins or dog fouling ones) everywhere. Therefore, we added a third element to our message: ‘**Bag it and bin it or take it home**’ in an attempt to persuade people to take it home if there wasn’t a bin available.



⁷ Website: <http://www.bbc.co.uk/news/uk-wales-21769616> (Visited: 08-02-16).

⁸ Website: <http://inudgeyou.com/archives/819> (Visited: 08-02-16).

For consistency, the same message was used on both interventions, along with paw print design artwork in bright pink, which we hoped would attract attention.

With the three areas chosen, we decided to use spray in Blaenau Gwent, signs in Bridgend and a combination of both interventions in Conwy.

Experiment sites were clearly defined making the boundary easy to recognise at each visit. The experiment was designed in a way that success could be tangibly measured. Officers visited the sites once each week for three consecutive weeks and on the same day each time, see timetable below.

Visit	Task
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Visit 1	Clean up the dog fouling in the study area.
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Visit 2	Clean up the dog fouling in the study area, recording the number of incidents present. Put the intervention(s) in place in the study area.
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Visit 3	Count and record the number of incidents present in the study area. Collect anecdotes and qualitative research from a survey with park users.
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Observations and a survey with park users were added to collect information on perceptions, their understanding of the interventions and other relevant data (please see Appendix).

As this was an experiment, rather than a campaign, we didn't produce or run any communications on the activity throughout the period as this would inevitably skew the results.

Cost

In this current climate of austerity, Keep Wales Tidy deliberately kept the cost of the experiments as low as possible, with the majority of the cost being staff time. Both nudges were designed in-house (the signs were printed and laminated at our office), so only the following items needed to be purchased which collectively cost under £125 (total).

Signs	Spray
-------	-------

- | | |
|--|---|
| <ul style="list-style-type: none"> • Posts • Hardboard | <ul style="list-style-type: none"> • Pink chalk-based spray (non-permanent and environmentally friendly) • Stencils |
|--|---|
-

A. Blaenau Gwent intervention – spray

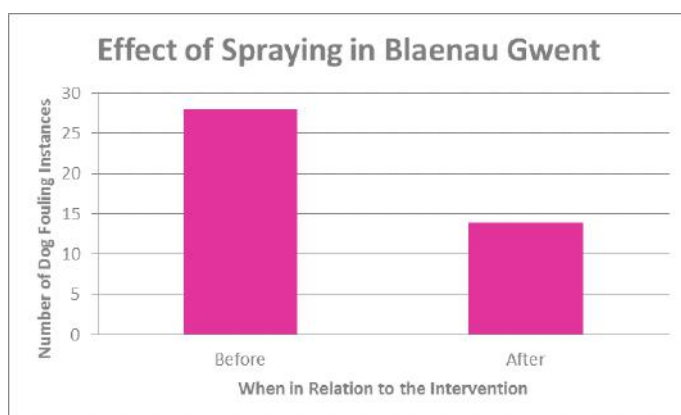
Beaufort Ponds and Woodlands, a popular Local Nature Reserve, was the selected location in Blaenau Gwent. The experiment area was suggested to the project officer by park users – a circular area of gravel path following the pond from the main entrance on Highlands Road and a meter either side of the path on the grass. There were no bins in the area, the closest one being outside the park on the street.



Source: Google Maps on www.freemaptools.com

The experiment was done in partnership with Welsh Baccalaureate pupils from the Ebbw Fawr Learning Community in Ebbw Vale, so started two weeks later than the experiments in Bridgend and Conwy (as there the timing fell within the autumn half term).

As well as the spray stencils, pupils also sprayed the dog fouling they saw to highlight the problem and show that it didn't go unnoticed.



Spraying led to a **50% reduction in dog fouling** in Beaufort Ponds and Woodlands (28 incidents before the intervention to 14 after).

Park users understood that the intervention was there to encourage dog walkers to pick up and bin the dog fouling.

Of the four park users we spoke to, three had noticed the spray, but only one thought that dog fouling had decreased (the others thought there'd been no change or didn't know).

Results: Blaenau Gwent

7

People mentioned that there are no excuses not to pick up dog fouling but that the darkness meant people weren't picking up (one student also thought people were less likely to pick up when it was raining).

Comments about the intervention included:

"It's scary what you can catch from dog mess, more so if you are a child playing and don't know the dangers. I'm certainly more aware of it now the fouling has been marked out. Hopefully people will clean up."

Jemma, park user

"It's very sad some people aren't very considerate for the dangers fouling poses to people. I walk my dog everyday on site, and I have noticed a decrease in fouling since you have started spraying. Well done!"

Jean, park user and dog owner

"I think the activity has been a success. I've noticed less dog mess as you enter the park which is a great improvement. I have also spotted a lot more people using the dog bin we have at the entrance, instead of throwing the bags into the trees."

Mr John Hillier, Ebbw Fawr Learning Community Teacher and community group member

"I don't like seeing dog mess everywhere and I hope we help keep the park clean by making people see how many people don't clean-up."

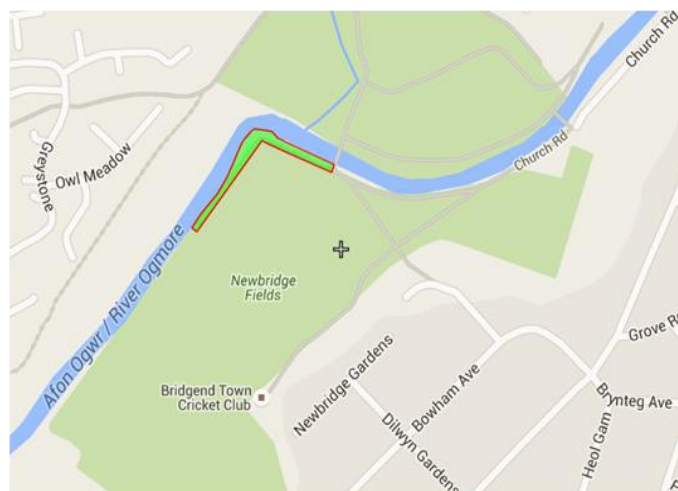
Nicola, student



B. Bridgend intervention – signage

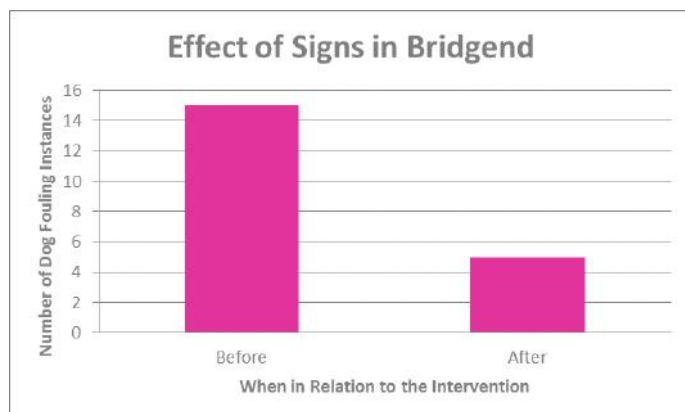
Newbridge Fields was the location chosen in Bridgend. This is a large park near the centre of Bridgend, which has football and rugby fields and is popular with dog walkers.

The Ogmore River splits the park into two distinctive sections, and the experiment took place in the southern section.



Source: Google Maps on www.freemaptools.com

The study area, which included litter and dog fouling bins, followed the main walkway (passing the park exercise equipment) starting just to the right of the path that crosses the river and finished at the dog fouling bin, with a width from the walkway to the river. Five signs were erected in the study area.



The signs led to a **66.6% reduction in dog fouling** in Newbridge Fields (15 incidents before the intervention to 5 after). This is a very significant change, and park users reacted very positively towards the signage, thinking it was a good idea.

Keep Wales Tidy discussed the intervention with seven park users, all of whom were dog walkers.

Overall, they had a good understanding of the purpose of the signs. Of the seven we spoke to, all five daily users had noticed the signs, while the other two who visited a few times a week hadn't.

Considering the success of the intervention, their perception of whether the amount of dog fouling had changed as a result of the intervention was surprising. Only one person thought there was less dog fouling, while two thought it was the same, one thought there was more and three didn't know.

Two park users mentioned the dark as a reason for more dog fouling at that time of year. Other comments made (all by separate park users) included:

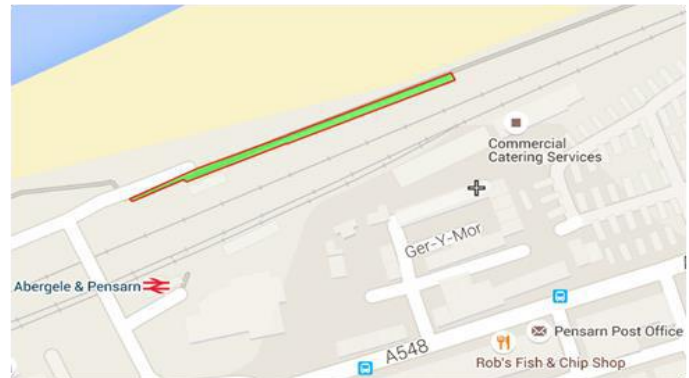
- the need for more dog fouling bins
- that some bins are occasionally overflowing
- that everybody who fails to pick up after their dogs should be fined (this by a male dog walker who had experienced a health issue as a result of dog fouling)
- that walkers do not always see them (the dogs) making a mess.



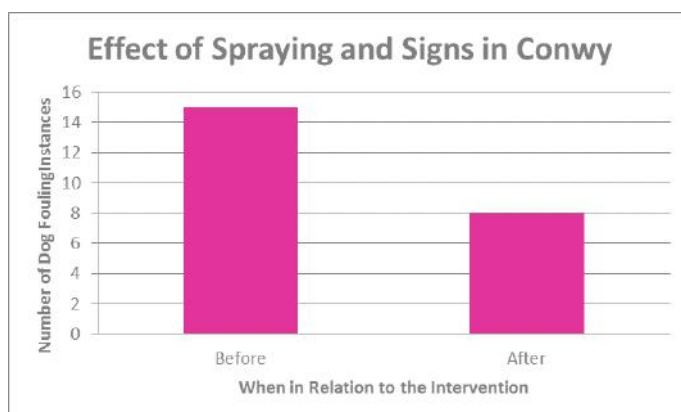
C. Conwy intervention – spray and signage

A different kind of public open space was used for the experiment in Conwy – a stretch of the Wales Coast Path at **Pensarn heading eastwards**. It is popular with walkers and cyclists and also has a café, pantry, gift shop and caravan site near the section of path. During our visits to the site, we met enforcement officers, there as part of their normal duties. They agreed that dog fouling was an issue there (they hoped to catch a dog owner who often fails to pick up).

The experiment site started at a bin and finished opposite the end of a building and included the paved walking path and a stretch of grass which ran alongside it. There was one dog fouling bin in the area as well a dog bin and a litter bin just outside the area. We used three signs on site as well as the paw prints. Dog fouling seen at the site was sprayed, as was the case in Blaenau Gwent.



Source: Google Maps on www.freemaptools.com



Spraying and the signs led to a **46.6% reduction in dog fouling** at the Pensarn Coast Path (15 incidents before the intervention to 8 after).

Overall path users were pleased that something was being done about the issue, and our discussions showed that they understood the message portrayed by the interventions.

Of the six path users we spoke to (four of which were dog walkers), all of them had noticed the experiment, despite the fact that one of them visited the area less than once a month. However, it became clear from discussions that more people had noticed the paw print spray stencils than the signs.

When we asked the users whether there'd been a change in the amount of dog fouling, of the five that answered this question, four said they thought there was less (with one of these saying much less), while the last user did not know.

Unlike the other two locations, in Conwy people thought that dog fouling was worse during the holiday period (there are several large caravan sites backing onto the path). Other comments made (all by separate park users) included:

- there are plenty of dog bins for the path
- people carry dog fouling bags to the next bin
- people throw dog fouling bags over the sea wall rather than bin them
- the path is used mainly by dog walkers
- that dog licences should be reintroduced
- that our interventions were a waste of time and that huge fines were the only answer.



If we collate the data from all three sites, overall the interventions resulted in a **53.4% decrease in dog fouling incidence** (58 incidents before the intervention to 27 after).

Like other nudges, we believe that our interventions have been successful as they gently encourage people to do the right thing.⁹ In our case, the nudges were positive, friendly, bright reinforcement, with an element of humour with the pink paw print design. They showed that dog fouling is an issue for people, but without making any reference to Keep Wales Tidy – indeed as far as the site users were concerned, anybody could have put them in place.

Lessons Learned

We learned some valuable lessons during the experiments, which are summarised below.

Timing of the experiments

We deliberately timed the dog fouling experiments later in the year, as dog fouling is thought to be a bigger problem when it is darker outside, as people are more hidden.¹⁰ This very issue was indeed raised by park users in Blaenau Gwent and Bridgend.

Unfortunately, however, the autumn brought its own problems, with leaf fall making it more difficult to find and identify incidents of dog fouling, especially on grass surfaces. Therefore, despite being even colder outside, January or February may be better months for such an experiment in future.

However, path users in Conwy commented that dog fouling was worse during the holidays, so if such nudges were to be carried out locally, timing could be decided on factors such as holidays, weather or footfall.



⁹ Website: <https://www.hubbub.org.uk/neat-streets> (Visited: 04-02-16).

¹⁰ Website: <http://www.keepbritaintidy.org/werewatchingyou/1668> (Visited 11-01-15).

Our initial plan was that the experiments in all three regions would happen over the same consecutive three weeks (commencing 19 and 26 October and 2 November), and this timing went ahead in Bridgend and Conwy.

However, as the local secondary school was involved in Blaenau Gwent, the start time had to be delayed by two weeks to allow the pupils to be involved for the duration of the experiment (the week commencing 26 October was half term).

In future, all experiments in a Wales-wide project, where comparisons hope to be made, should take place at the same time for consistency.

Spraying and stencils

We knew from using chalk-based spray in the past that it showed up well in the outside environment.¹¹ However, we were aware that the same wouldn't apply to spraying stencils, which would only be clearly visible on hard surfaces. This did mean that in Blaenau Gwent and Conwy, we were limited to dog fouling hotspots that had footpaths as the stencil design wouldn't work on grass. So, for dog fouling hotspots on all-grassed areas, signs or other nudges would need to be used.



The spray we used was chalk-based and therefore non-permanent. With a three-week experiment where the spray was applied during week two this was fine, but for a longer term spray intervention, the spray would need to be reapplied (especially during periods of wet weather).

Discussions with users in Conwy show that the paw prints showed up well and that these were what most people noticed. However, the stencil text was a little small, so in future a larger stencil should be used to improve awareness and understanding of the message.



Having paw prints leading to a dog fouling or normal bin is the ideal situation, as this gives dog walkers somewhere to dispose of the dog fouling in the walking area. This worked well in Conwy, where the paw prints led to a dog fouling bin (which also had a sign on it). However, there were no bins within the experiment site in Blaenau Gwent, and the results were still good, which suggests that a nudge can still be effective in an area without bins.

¹¹ Website: <http://www.walesonline.co.uk/news/local-news/eco-charity-paints-town-yellow-7895786> (Visited: 11-01-15).

In Blaenau Gwent and Conwy, as well as spraying the paw prints and 'Bag it bin it or take it home' message, we also sprayed the dog fouling to highlight the problem. This was an additional intervention showing that dog fouling is present and noticed by people. However, it could have been read in one of two ways:

- that dog fouling is present and should be cleaned up
- that it is common behaviour to leave dog fouling

Peer pressure has a strong influence on society and it is possible that spraying the dog fouling could lead people to think it is 'normal' to leave dog fouling.

In future, if a different intervention is implemented, it should be used on a site of its own so its effectiveness can be measured separately. Currently, we cannot say whether the 'bag it bin it or take it home' on the spray/signs or spraying the dog fouling had the biggest impact. Neither can we properly assess whether multiple interventions were more effective than using only signs in Bridgend.

For each location, we asked permission to undertake the experiment from the relevant local authority. The importance of getting permission was made evident when we were approached by a PCSO who initially thought we were graffiti-ing. This is also relevant to signs (which could be seen as fly-posting).

Signs

We found that the laminated signs were a little flimsy when used alone (as was the case in Conwy). Therefore, hardboard and posts were purchased for the Bridgend experiment.

Although the signs remained on site and in good condition throughout the experiment period, signs cannot be expected to be very long lasting. In Conwy, we were told that all signage gets pulled down eventually. We also understand that there are problems with vandalism in some areas. So for longer lasting experiments and impacts, signs would need to be replaced or made sturdier.

In Conwy, where both interventions were used, discussions with users show that more people noticed the spray than the signs, so as with the spray text, a larger sign would have been better (signs were A4).



Keep Wales Tidy is encouraged by the success of our interventions in all three areas. Our results show that nudging can be an effective way of changing behaviour, but this initial work can be built upon and developed further.

As with all issues relating to the quality of the local environment, dog fouling is a complex issue, which has many related factors. Some of these are human factors, e.g. our research shows that more young people (than those in other age groups) think that forgetting a poo bag is an excuse for not picking up after your dog.¹² However, there are also many external influencing factors such as time of day and year, weather, footfall, facilities (bags, bins) etc.

Undertaking nudges over a longer period of time would reduce the impact of these individual factors on the overall result of the experiments. This would also give a better indication of whether the nudges have a long lasting impact.

Measuring the extent of behaviour change could be improved by clearing and counting instances of dog fouling over a larger area than the perimeters of the nudge interventions. For example, in a small park, a nudge could be put in place on a path on one side of the park, but dog fouling could be cleared and counted from the whole park, and perhaps even the adjacent street. This would better determine whether the behaviour had changed, as opposed to the dog fouling issue being moved to the other side of the park or onto the street.

Moreover, more nudges could be tested. The UK Government has found that by making nudges personal, there has been an increase in their success¹³, so a sign with a message such as 'Is it YOU that leaves your dog's poo in [insert park's name] park' could be tested.

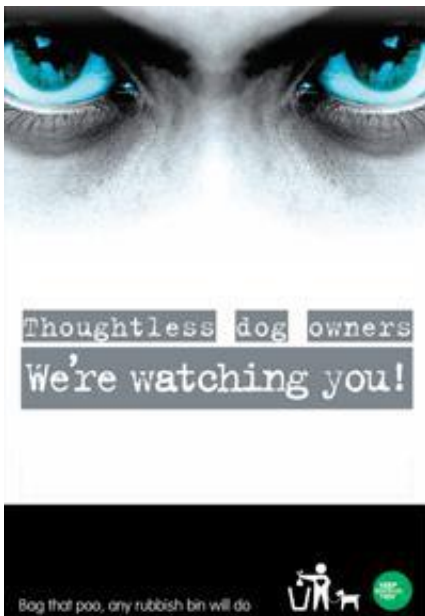


¹² Keep Wales Tidy (2012) Wales Omnibus Survey by Beaufort Research (unpublished).

¹³ Website: <http://www.bbc.co.uk/news/magazine-33629019> (Visited: 04-02-16).

Messages could also be tailored to certain behaviour traits. For example:

- Our research shows that 9% of people think it is acceptable not to pick up after your dog if you're walking in the countryside.¹⁴ A nudge of paw prints and small footprints could be used in a rural location with the message saying 'dog fouling causes blindness and children use this path' (reducing the spread of disease and the *Toxocaracanis* parasite are important factors influencing people to pick up after their dogs¹⁵).
- Visibility is considered to be an important factor determining behaviour. High visibility is believed to reduce dog fouling with people being more likely to pick up after their dogs and less likely to leave bagged waste behind.¹⁶ A possible message to target this behaviour would be to emphasise how many people use the area, or that people notice those who fail to pick up after their dogs, (which is similar to that used by Keep Britain Tidy in the 'We're Watching You' campaign¹⁷).
- Research by Keep Britain Tidy shows that 'justifiers' tend to think they won't be caught for failing to pick up after their dogs.¹⁸ To target people with this belief, an effective nudge might be signage stating how many people have been issued with Fixed Penalty Notices locally, using enforcement dog fouling signage, such as is already used in Denbighshire (below centre) and Neath Port Talbot (below right), or even making the area a crime scene¹⁹.



¹⁴ Keep Wales Tidy (2012) Wales Omnibus Survey by Beaufort Research (unpublished).

¹⁵ Lowe, C.N., Williams, K.S., Jenkinson, S. and Toogood, M. (2014) 'Environmental and social impacts of domestic dog waste in the UK: investigating barriers to behavioural change in dog walkers', *Int. J. Environment and Waste Management*, Vol. 13, No. 4, pp.331-347. Available: <https://www.iwight.com/azservices/documents/1376-Dog-waste-behavioural-change-dog-walkers-IJEW13040-2014.pdf> (Visited: 22-03-16).

¹⁶ Williams *et al.* op.cit.

¹⁷ Website: <http://www.keepbritaintidy.org/werewatchingyou/1668> (Visited 11-01-15).

¹⁸ ENCAMS (now Keep Britain Tidy) Dog Fouling and the Law.

¹⁹ Website: https://www.youtube.com/watch?v=8a_C3Tzbam8 (Visited: 08-02-16).

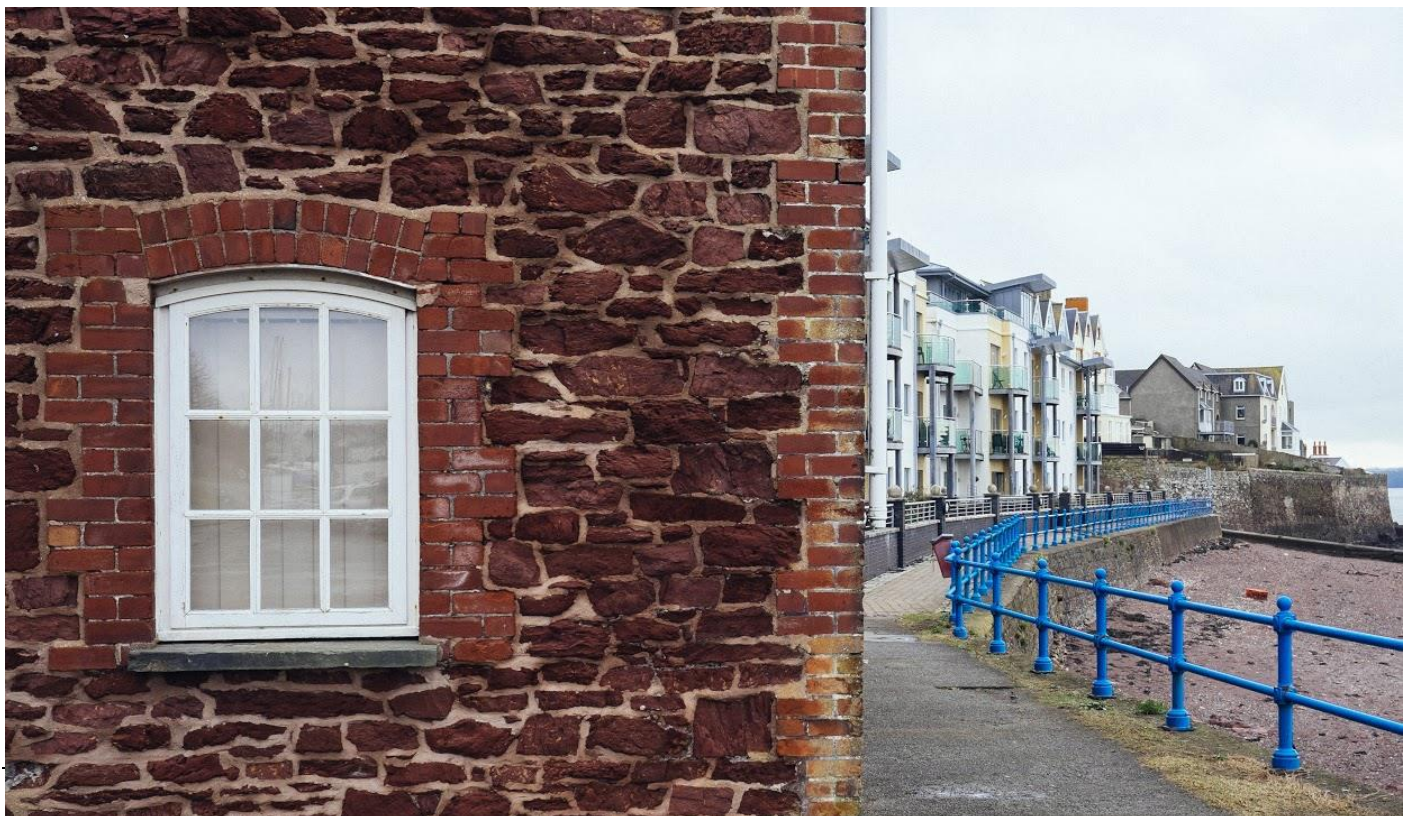
Our research shows that the vast majority (78%) of dog owners think it is never acceptable to leave dog fouling, with only 5% admitting to failing to pick up after their dogs in the past year.²⁰ This suggests that most dog walkers are responsible and pick up after their dogs, and could form the basis of another possible nudge – encouraging the minority to conform to the social norm (such a message could also be used to change littering behaviour).

Picking up dog fouling is considered the right thing to do and this is thought to be the most important factor influencing dog walkers to clear up after their dogs.²¹ This is another positive message that could be used to encourage responsible behaviour.

Many nudges could be trialled across different areas (with one nudge per area and with all taking place the same time if they are to be compared). Or, to see whether one works better than another with a certain community, different nudges could be used at different times but in the same location.

If proved successful, this behaviour change technique could be repeated across Wales by Keep Wales Tidy and others.

It is important to remember however that unfortunately, a minority of dog walkers want to get rid of dog fouling at the earliest opportunity, are unwilling to take dog fouling home or into their cars, or in some cases are disengaged altogether²². Therefore, as identified in our previous research, other (more hard-hitting methods, such as enforcement) are likely to be needed to deal with these harder to engage individuals as part of a wider behaviour change strategy.



²⁰ Keep Wales Tidy (2012) Wales Omnibus Survey by Beaufort Research (unpublished).

²¹ Williams *et al.* op.cit.

²² Williams *et al.* op.cit.

Nudging has been used successfully to change behaviour in many fields, including local environmental quality. Our nudges have shown that this clever technique can also be used to change behaviour in relation to dog fouling.

Unlike much previous work undertaken by ourselves at Keep Wales Tidy and our local authority partners to tackle the persistent and dangerous issue of dog fouling, our experiments were designed to tangibly measure the impact of the interventions.

The dog fouling data demonstrates that our interventions were successful in nudging dog walkers' behaviours. The number of instances of dog fouling reduced significantly at the intervention sites in all three dog fouling hotspots, with reductions ranging from **46.6% to 66.6%**. The overall reduction across the three locations was **53.4%**.

Although this is a very positive result for all areas, this experiment should be replicated across larger areas and over a longer time frame in order to build on the evidence base for the success of nudge interventions.

Once data shows that this can work over a longer time frame and at-scale, without moving the problem to other areas, we could then recommend that local authorities consider similar approaches to tackle the problem.

Furthermore, our experiments were supported by the public, with the majority thinking that the interventions were a good idea. Discussions with users showed that the nudges were also well understood by local people. They were also low in cost, which considering the current economic climate, is particularly important if such experiments are to be replicated.

Keep Wales Tidy would like to build on these impressive results. In the future, we hope to develop our behaviour change work further, testing more dog fouling nudges using the lessons learned from this initial work.

We recognise that prevention is better than cure and see potential in using nudge techniques for other issues affecting the quality of the local environment. If the success of this work continues, we would like to facilitate the roll out of nudge as a behaviour change methodology across Wales for the benefit of the environment and people of Wales.

Park user questionnaire

1. About Park User *(to be completed without asking park user the question)*

Gender: ☐ Male ☐ Female

Age: ☐ < 16 ☐ 17-30 ☐ 31-45 ☐ 46-60 ☐ >60

2. Park User – Use of Park

Are you a dog walker? ☐ Yes ☐ No

How often do you use this park?

☐ First visit ☐ Less than once a month ☐ A couple times a month ☐ A few times a week

☐ Every day ☐ More than once a day

3. Intervention

Have you noticed the paws/signage? ☐ Yes ☐ No

What do you think its/their purpose is? (Open question)

4. Dog Fouling

How much dog fouling have you noticed today compared to last month?

☐ Much less ☐ Less ☐ The same ☐ More ☐ Much more ☐ Don't know

Where can you dispose of bagged dog fouling?

☐ Litter Bin ☐ Dog fouling Bin ☐ On top of a bin ☐ Household refuse bin

☐ Garden waste ☐ Don't know ☐ Other please specify

5. Any other comments.

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