

Caru Cymru Guidance: Roadside Litter

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Contents

The Caru Cymru approach.....	3
Why does roadside litter matter?.....	3
Infrastructure.....	5
Interventions.....	6
Messaging.....	9
Innovation.....	10
Community action.....	12
Enforcement.....	13
Monitoring and evaluation.....	15
Appendices.....	16
Trunk Road Agency and Local Authority Responsibilities.....	16
A55 Trial Signage.....	17
Equality and Diversity Issues with Public Toilet Closures.....	18
Portable Toilets for Commercial Drivers.....	18
International Tourist and Commercial Driver Language Considerations.....	19
Commercial Drivers Survey Questions.....	19

*This guide is designed to accompany the materials and messages designed through the Caru Cymru project.

*Key audiences for this document include local authorities, Town and Community Councils, National Park Authorities, Natural Resources Wales and other landowners as well as other agencies interested in developing policies to promote the responsible disposal of smoking-related litter.

* More information can be found on Keep Wales Tidy's [roadside litter paper](#) (2017).

The Caru Cymru approach

Caru Cymru is a collaboration between all 22 local authorities in Wales and Cardiff University to reach our shared vision of a beautiful Wales, cared for and enjoyed by all. Building on our many years of experience working in communities and schools and our expertise in behaviour change, Keep Wales Tidy has developed a unique approach to tackling local environmental quality issues at the local, regional and national level.

Locally, we are working with partners to develop solutions in their areas, engaging with volunteer groups, schools and businesses to foster pride and ownership of the spaces on their doorstep. Nationally, we are hoping to address some of the barriers to collaboration on the most persistent issues through the development of standardised messaging and interventions, based on positive and informative information, from litter to fly-tipping to plastic reduction. We aim to support our partners in creating an enabling environment across Wales to encourage people nationwide to 'do the right thing'.

Keep Wales Tidy's National Roadside Litter Campaign will run from April 2022 and a number of trials are being developed as part of Caru Cymru with information being updated to this paper accordingly as it becomes available.

This guidance is designed to support the campaigns and interventions on roadside litter and provide advice to Local Authorities and other duty bodies to achieve a more consistent approach across Wales.

Why does roadside litter matter?

Litter is a blight on our streets and communities and costs us dearly, whether environmentally, economically or socially, the impacts are far reaching. Roadside litter in particular presents a complex, problematic and highly costly problem. In Wales, trunk roads and motorways are managed by the Trunk Road Agencies (under the Welsh Government) and the remaining roads come under the responsibility of the local authorities in their relevant areas. Roadside litter and associated statistics are particularly problematic to collect as there is a genuine health and safety issues due to the proximity of high-speed traffic.

Data collected from a survey of Local Authorities and Trunk Road Agencies for Keep Wales Tidy's 2017 Tackling Litter on Our Roads report¹ forms estimates that roadside litter collection costs equate to over £3 million per year in Wales which is considered a significant underestimate. In interviews carried out with all Local Authorities in Wales as part of the research, 57% of all respondents said that they believed that roadside litter had increased in the past two years whilst 38% said that there had been no change.

In the past few decades, the rise in the number of cars on the road in the UK has increased rapidly, from 21 million in 1995 to 31 million in 2015, with last year's figures showing an unprecedented increase of nearly 600,000². Increased car use has also coincided with the propensity for many of us to consume food and drink 'on the go'. A sandwich, crisps or a snack bar and a bottle to drink is many people's lunch, consumed in transit as we travel from one place to another. 16% of motorists in England have admitted dropping litter out of their car windows³.

The risks of roadside litter cleansing may necessitate lane closures, the use of crash barriers and additional signage and therefore some agencies carry out litter picking at night, with a view to having the least impact on traffic. Consequently, the cost of such operations can be substantial. According to Clean Up Britain; 'for every £1 spent on clearing litter, councils sometimes pay an additional £10 'coning off'/complying with health and safety requirements'⁴. Over the past 10 years there have been 12 roadworker deaths and 50 occasions of roadworker injury on the road network⁵, and between October 2017 to October 2020 there were an average of 175 incursions a month into roadworks by motorists⁶. The situation proves particularly dangerous for works occurring at night when visibility is poorer. Roadworks are key places where traffic slows down and is therefore an opportunity to highlight messaging, particularly around worker safety. This has been trailed in a number of locations across Wales through the Caru Cymru project with contractors Alun Griffiths on the A55 and will be extended to other areas of Wales later in 2022.

As well as issues around cleansing, safety of workers on roads also makes gathering data on litter levels a challenge. Emerging developments with artificial intelligence (AI) technology could provide an opportunity for monitoring roadside litter on motorways and high-speed roads without the risk to road worker safety and is a current area of exploration at Keep Wales Tidy. For Local Authorities who wish to monitor interventions on the ground, more information can be found in the [Monitoring and Evaluation](#) section of this paper.

Key points

1. Roadside litter data is difficult to collect but is estimated to exceed £3 million per year in Wales in cleansing alone.
2. There is the potential for the application of AI to monitor litter levels on motorways and high-speed roads where physical audits are not possible although the technology is still in its early stages.
3. Roadside litter is likely to increase with the number of road users and parallel increase in purchases of 'on-the-go food and drink.
4. Safety aspects of roadside cleansing increase the cost substantially and pose a real danger to roadside workers.

Infrastructure

Bins in laybys is a highly contested topic as evidence suggests that bins being absent OR full could increase littering behaviour⁷. Therefore, a well-planned bin policy may help place bins where they are needed whilst ensuring they are emptied frequently enough to avoid overflowing and subsequent justification of littering around the base. Highways England (2021) found people are more likely to litter smelly or messy objects, on longer journeys, where drivers regularly stayed in their vehicles overnight (specifically commercial drivers such as HGV or delivery van drivers) and away from urban areas. Considering this, roadside bins should be best placed near to on-the-go food suppliers and overnight parking areas to reduce the time potentially messy and smelly litter needs to stay in the car. Furthermore, these bins should be easy and convenient to use for those in cars and commercial vehicles, indicating placement in appropriate areas would work best, for example, at the exit to a car park.

Spotlight on: Hubbub's Drive Down Litter Campaign

In Hubbub's Drive Down Litter Campaign, large, colourful collection bins were trialled at a service station in Maidstone and petrol station in Folkestone, Kent⁸. The large apertures, roadside placement at exits, and height designs (shorter for car drivers, taller for HGV drivers) made it easier for both car and HGV drivers to dispose of their litter without leaving their vehicles. Coupled with appropriate messaging, recycling incentives and raising awareness, the evidence suggests a 60% drop in littering on the nearby slip roads after the campaign.

However, many Local Authorities in Wales mention the issues the wide apertures cause through attracting pests like seagulls, who then pull the litter out of the bin. This demonstrates that if used, these bins need to be more regularly maintained or designed in such a way as to deter or prevent pests from accessing them. Design improvements could involve light weight flaps to prevent access to pests, but in a way that doesn't reduce the ease of using the bins to passing motorists disposing of rubbish whilst not leaving their vehicle, but this needs to be ground tested.

It is a well-studied phenomenon that increasing the visibility of bins, increases their usage across a variety of settings. Whilst there is no one type of bin which performs better than others, there is the need for local authorities and other landowners to assign the right bin in the right place. Specific bins of the nature used in the example above, would be ideal in lorry parks, service stations and ferry terminals where facilities are lacking. Of the 140 respondents to a recent Keep Wales Tidy's Commercial Driver survey (2021), many respondents stated they did not think there

were sufficient facilities for them to dispose of their rubbish at lorry parks (37%), service stations (35%) and ferry terminals (31%).

Keep Wales Tidy will be trialling 'car bins' for personal vehicle use which is discussed in the 'Innovation' section, but in the abovementioned survey of commercial drivers, 80% stated they already had a vehicle bin, or an equivalent, with all those who have a bin stating they use it regularly. This is not the case for personal vehicles and is not yet part of the culture in the UK as it is in the United States where personal car bins are fairly common.

Bin provisions and placement issues are explored in more detail in Keep Wales Tidy guidance on Bininfrastructure.

Another element of responsibilities which needs to be considered include the current lack of clarity in regard to Trunk Road and Local Authority responsibilities in certain areas. This is explored further in the [Appendices](#).

Key Points

1. Local authorities and other landowners need to consider the right bin in the right place. Data collection and analysis would support the development of bin audits and should be regularly reviewed.
2. Bin removal from some areas, such as rural laybys, could help to reduce litter in those areas but should be kept under regular review.
3. Bins in laybys where the public would 'reasonably expect' facilities (such as rest stops and places where there are public toilets or food provision) should be maintained and can also be used to promote anti-litter messaging.

Interventions

Traffic psychologists argue that different psychology needs to be applied to people once they are in charge of a vehicle⁹. A crude example would be the phenomenon of 'road rage' in otherwise calm people. Further research also suggests too many roadside signs may be ineffective due to the overload of stimuli already occurring whilst driving. A previous trial carried out by Keep Wales Tidy showed that messaging which is effective in a pedestrian setting actually served to increase litter when applied at the roadside.

This would indicate that separate, targeted campaigns for drivers would have more of an impact in changing behaviour and intervention placement should focus on stopping places like laybys,

service stations and car parks. However, it is difficult to target *all* drivers as the vast majority of the U.K.'s population (81%) has access to a car¹⁰. Some recent vehicle littering studies identified that those most likely to litter are between the ages of 18 – 44 years old, people with children aged 4 or under, males, those of low socio-economic status and commercial drivers^{11,12}. This is a considerable cross section of the general public.

If we are to engage and educate, as well as enforce, a referral programme for offenders, similar to the speed awareness course if caught speeding in a vehicle, could be a more focused and sustainable option for promoting behaviour change and education in the long term. More information on this is available in the '[Enforcement](#)' section of this paper.

In urban areas, where traffic is high, a focus on active travel and the promotion of walking, cycling and public transport use can achieve multiple benefits. Although it should not be assumed that walkers and cyclists do not litter of course, there are more opportunities on public foot and cycle paths to dispose of your litter responsibly compared to driving as well as the additional health, wellbeing and environmental benefits. Investment in public transport is also key to reducing reliance on the car and reducing traffic and emissions. In-store efforts to promote awareness of a local issue can also work well. This could also be a wider agreement with a number of businesses in out-of-town retail stores or large supermarkets, where signage or other interventions can be erected at entrances and in the car park or transport hubs. In addition, the Covid-19 pandemic has seen a large-scale transition to home working for many organisations, one of the positive consequences of this has been a reduction of vehicles on our roads which contribute to lessening the problem of roadside litter. In Wales at least, the promotion of options for home (or remote) working appear to be continuing even as Covid-19 restrictions ease.

Economic interventions could also be introduced in order to reduce the amount of packaging at source or raise revenue to address cleansing or other interventions at the point of disposal. Examples include levies on parking, taxes for materials or deposit return systems which could allow for small but not insignificant revenue to be raised and ring-fenced to tackle the issue. Increasing the revenue available for cleansing is important for deterring future litter but also to ensure that local authorities and highways agencies are equipped to tackle this particularly costly activity.

Highways England (2021) found commercial drivers were often not given guidance on how to dispose of their litter but may be specifically told not to use or misuse on-site bins and that vehicles must be returned meeting certain cleanliness conditions¹³. The Keep Wales Tidy Commercial Driver survey carried out in 2021 found that many drivers feel they do not have sufficient access to bins and toilet facilities. Although the majority of respondents noted there was no good excuse to litter, they also acknowledged that keeping the vehicle clean was a big influence on littering behaviour. This creates potential pressure for littering or fly-tipping, therefore employers of commercial drivers are in a position to provide suitable guidance to reduce these problems.

The survey results also found in the past 6 months that a considerable number of respondents had to leave bodily fluid (40%) or bodily waste (20%) at the roadside. This was attributed most commonly to a lack of facilities, particularly in areas with the space for HGV parking followed by issues of time, cost, cleanliness, refusal of use by delivery recipients (e.g. retail premises) and safety. This issue is not a new one.

It is highly recommended that local authorities work with relevant associations to create to review and assess the options for facilities in their area for commercial drivers. This needs to include adequate facilities at established lorry parks and a mapping exercise of public toilet facilities with HGV parking available. Key terminals such as ferry ports and major service stations should also be

included. Once this assessment has been completed, it should be reviewed regularly and could form part of a simple app specifically designed for lorry and commercial drivers such as the TruckR app in New Zealand which has been developed by the New Zealand Transport Agency¹⁴ (UK apps to locate public toilets already exist but not with lorry drivers in mind).

Whilst reopening public toilets may be considered unrealistic due to costs; it is worth noting the significant public health and equality impacts that have are being seen as a result of the closures, this is outlined further in the [appendices](#). Rather than disposing of these facilities entirely, companies with a stake in the area could be approached to sponsor facilities on commonly travelled routes.

Spotlight on: Keep Your Cab Fab!¹⁵

Keep Your Cab Fab! was a campaign established in Northwest Leicestershire based on research with the haulage industry to address the dumping of rubbish in local laybys. The research found that many commercial drivers were unaware of any rules or regulations regarding vehicle littering in their work contracts. Haulage firm, Pall Ex, partnered with the Council to create a 'charter' urging local businesses to tell their drivers to 'keep their cabs fab'. 'Cab packs' containing a small bin, bin bags and hand sanitizer and information on waste disposal and recycling were provided to drivers.

Nonetheless, research also finds trying to keep their cabs 'fab' was one reason why commercial drivers disposed of litter irresponsibly in the first place. Justifications for getting rid of litter this way include:

- Either through their employment contracts or social norming, drivers stated it was frowned upon to leave litter in the vehicle for handover to the next driver
- Some depots deter drivers from using business bins as they have to pay for their waste to be collected and disposed of¹⁶
- As a place of work, smoking in a cab is illegal so traces of traces of smoking must be removed.¹⁷

Therefore, 'Keep your cab fab!' messaging may have the opposite outcome to what is desired unless carefully adopted with the right messaging and infrastructure provided.

Key points

1. Traffic psychology suggests interventions are best placed in stopping areas to prevent overload and distractions whilst driving. Roadside signs on busy roads are not recommended.
2. Reducing litter on our roads is also supported by active travel agendas and the ambition to reduce vehicle use overall.
3. Commercial drivers have cited that the lack of facilities at rest stops, lorry parks and laybys is a significant challenge for them. Bodily waste and fluids at the roadside will continue to increase in severity unless action is taken to address these concerns.
4. Appropriate waste disposal policies and facilities by employers at depots and in-vehicle for commercial drivers will reduce the pressure to litter.

Messaging

As previously stated, any messaging would have to be trialled in areas where driver stop to avoid distractions whilst driving. There have been a wide range of suggestions and ideas from various research and surveys which can be considered best practice. For non-commercial drivers, research suggests messages around enforcement, the environment/harm to wildlife and community will have the largest impact on drivers^{18,19}. The wildlife and enforcement angles are supported by Hubbub's Big Boys Don't Litter Report (2021) which focused on young men (a roadside litter target audience, but not in the context of roadside litter specifically) and found educating them about dangers to nature and potentials for fines would discourage them from littering²⁰. However, care needs to be taken when using enforcement messaging as it is ineffective unless there is a very real and visible threat of being caught.

According to Highways England (2021) and Keep Wales Tidy's (2021) respective data gathering, for commercial drivers, the most supported anti-littering messaging themes are harm to wildlife²¹, national pride, worker safety and enforcement. In Keep Wales Tidy's 2022 National Roadside Litter Campaign, messaging around keeping a clear conscience by not littering will be trialled based on research that the majority of vehicle litterers feel guilty after the act²². This paper will be updated to reflect the outcomes of the campaign in due course.

Where national pride and community-based signage are trialled, it's important to use messaging that also speak to Wales' non-nationals like tourists and commercial drivers from outside of Wales. For example, 'this is our Wales, keep it clean' is unlikely to resonate with visitors, but 'Wales is beautiful, keep it clean' will be relevant to everyone. Studies have shown that people are more likely to litter when they are on holiday or at the very least demonstrate a lower standards of responsible waste behaviour²³. Equally important is recognising messaging that won't work. For example,

messaging around the ease of doing the right thing and reinforcing the amount of people who 'do the right thing' proved unpopular with commercial drivers. This could be because they feel they are limited in their physical capacity to bin their litter due to a lack of facilities or other commercial driving pressures. In considering use of language for the national campaigns, see the [appendices](#).

In 2015, a successful Keep Britain Tidy campaign 'We're watching you' used posters with eyes on at service stations to reduce littering by 23%²⁴. This used behavioural insights that people are less likely to litter if they think someone is watching them.

Promoting the economic argument of roadside litter has, to date, not been a focus in Wales. The message that, according to Highways England, 'it can cost £40 per bag of litter, which is roughly what it costs to repair a pothole'²⁵ may well resonate with some communities, perhaps particularly for the more rural areas of the country where road repairs are not managed as frequently as on major roads. Billboards on roads which 'add up the costs' leading to a 'total cost to the taxpayer' message to cover worst stretches could be trialled. Signage stating the reasons for any road closures or diversions should also be erected.

Key Points

1. Messaging focuses vary for personal and commercial drivers and likely between urban and rural demographics.
2. Messaging placement is the most important aspect to consider, with many roads already saturated with necessary signage and driver attention 'at capacity'.
3. Messaging should consider the flow of external visitors into an area and how to 'connect' them with their destinations.

Innovation

'Car bins' are being trialled by Keep Wales Tidy in Partnership with McDonalds. Three McDonalds takeaway restaurants across Wales will distribute for free, 150 car bins, 50 of each of the 3 designs. They will be accompanied by a request to complete a survey on information about the user and the bin. Car bins have been used in various campaigns to reduce roadside litter in central Europe but has also proved attractive to companies who want to promote their products to car drivers such as Shell Oil, Febreze and the AA. It is thought that this could be an effective and standard option for hire car and personal vehicles. The bins can be attached in various ways to the car interior and additionally offers advertising space for companies or campaigns. In a 2009 Keep Britain Tidy Report, they asked drivers if they would buy a car litter bag, only 16% said yes. However, when asked if they would use one if given it for free, 83% said yes and 81% said it would reduce the amount of litter they throw from their car²⁶. The design trial by Keep Wales Tidy will be published in the summer of 2022.

Spotlight on: Keep Australia Beautiful: WA Naturally Thank You Litter Prevention Project²⁷

In 2016, Keep Australia Beautiful Western Australia (WA) joined forces with the Australian Packaging Covenant and Main Roads WA to tackle roadside litter. The trial project involved up to 20 roadhouses along three busy highways and included 30 roadside signs, bin stickers installed along highways, posters in roadhouses and more than 300,000 free car litter bags distributed via roadhouses to encourage motorists and passengers to do the right thing with their rubbish. At the end of the study, there were average reductions in litter volumes of 59%.

As mentioned in the '[Infrastructure](#)' section of this paper, target bins are a relatively new type of bin used around takeaway food restaurants. The large apertures allow for users to insert large amounts of rubbish like fast food packaging with ease without leaving their vehicles. These could be particularly effective with lorry drivers or drivers of larger vehicles but need to be considered alongside systematic reviews of facilities and options for disposal along major routes. As with any type of bin provision, there is a need to consider the long-term maintenance. 'Novelty' bins can be expensive to purchase and may decrease in effectiveness over time unless they are reviewed, replaced and refreshed on a regular basis.

Key Points

1. Changing behaviours rely on making the desired behaviour both easy and convenient, car bins are one way to overcome the lack of facilities and can support anti-littering campaign messaging in the process.
2. Innovative bins installed on roadsides need to be frequently maintained and would need to be long-term installations.



Community action

Keep Wales Tidy has links to over 239 community groups across Wales who all work hard to improve their local area. An analysis of litter data and strategies in Wales found there was an unprecedented number of litter picking volunteers which provide an opportunity for greater collaboration and complement the work of Local Authority services²⁸. The idea of road adoption schemes comes from the United States where many community groups voluntarily adopt areas of roadsides.

First established in the 1980's, Keep America Beautiful (and regional equivalents) support the coordination of the 'Adopt-a-Highway' programme seen across the country. This programme encourages volunteer and community groups to adopt a stretch of the highway and clear up the roadside litter. In return, the group is given 'advertising' space along the roadside. Some states also operate the 'Sponsor a Highway' scheme where organisations pay for private contractors to pick up litter, in return for the same advertising space. The latter is much more common on major roads with significant volumes of traffic.

Adopt-a-Highway is being trialled by Keep Wales Tidy in early 2022. A number of Local Authorities have already shown interest in the scheme and will be part of the trial. Formalising such a system would guarantee that each group had the correct health and safety equipment in place. Litter hotspot stretches (of no more than two miles) will be identified and adopted by an interested community group, and all sites will be risk assessed by the Local Authority and Keep Wales Tidy in conjunction with community group. The groups are expected to carry out a minimum of four clean-ups per year and monitor levels of litter through the Epicollect app. Keep Wales Tidy will provide detailed Health & Safety guidance and a template for the road signs.

Spotlight on: Adopt a Highway²⁹

The Adopt-a-Highway (AAH) programme started in Texas in 1985. It involves volunteers adopting a 2-mile stretch of highway for a minimum of 2 years, agreeing to clean up the area at least 4 times a year. In return, the volunteers receive safety training, litter bags and safety vests as well as signs with the group's name along the relevant section.

Additionally, the nominated adoptee indemnifies themselves from claims against the State. Each state administers their own programme although the agreement is broadly replicated across the USA. There are also sponsorship-based schemes across the USA, whereby individuals and organisations give monthly payments towards the upkeep of a particular stretch of highway. This scheme in particular has arguably given rise to a vast number of related companies offering the service.

Some states also offer the adoption of laybys, carpark and 'rest-stations'. According to a national survey of Adopt a Highway schemes in 1999:

- 962,502 volunteers are picking up litter in 48 states
- The annual cost of picking up roadside litter totalled \$106,833,568 for the 33 states reporting.
- 27 states have an annual Trash-off event (a national clean-up day)
- 43 states allow volunteers to recycle
- 26 states allow inmate volunteers
- 88,919 AAH groups are in the United States.
- 206,564 highway miles have been adopted in the United States.

Key points

1. There are an unprecedented amount of litter picking volunteers to collaborate with at present in Wales.
2. Roadside safety is the largest concern regarding community group litter picking in these areas.
3. Adopt-a-Highway has been hugely successful elsewhere and is the only roadside campaign to have been thoroughly evaluated. The pilots in Wales with Keep Wales Tidy will be completed by mid-2022 with the view to rolling the scheme out nationally in due course.

Enforcement

Littering from a vehicle is an offence under section 87 of the Environmental Protection Act 1990. If an enforcement officer (or someone with enforcement powers) is witness to someone throwing litter from a vehicle, the relevant authority can apply for the car owner's details to be released by the DVLA and they can then be issued with a Fixed Penalty Notice (FPN). There is a limitation in regards that such details can only be sought when the offence is witnessed by an enforcement officer or where a Section 9 witness statement has been taken from a member of the public and the requirement for the offender to be identified. In England, an addition to the Antisocial Behaviour, Crime and Policing Act (2014) provides the option for civil penalties for this offence charging offenders OR the registered owner of the vehicle between £65-150, but this does not currently extend to Wales.³⁰ An update to the Welsh legislation is currently being considered as part of the Litter & Fly-tipping Prevention Plan for Wales which is due for publication in 2022 but the primary legislation process to pass the amendment is expected to

take much longer. Until this amendment extends to Welsh legislation, the process of fining drivers for littering will remain a challenge.

Research from Huffman and colleagues, group litter prevention strategies into 2 categories: a) preventative strategies (e.g. signs, community involvement, design) and b) consequence strategies – rewards and penalties. They concluded that both types are generally effective in reducing litter but that the consequence strategies generally outperformed the preventative strategies.³¹ However, the threat of enforcement is only effective when it can be backed up with actual consequences and a real and visible risk of being caught. For many public bodies, enforcement is a rather cumbersome and resource-heavy process, for littering in particular, there is the additional complexity of having to be in the 'right place at the right time'.

Ideas surrounding printing vehicle registration plate numbers on takeaway food packaging have been proposed although have not been progressed to date due to concerns around data protection requirements. DEFRA recently responded to a parliamentary petition stating this measure would not be cost effective for businesses or enforcement, and that there would be data protection implications.³² Therefore, it is not pursuing it further at this time. However, the idea to trial the impact of the behavioural concept for change (rather than the link with enforcement) is still a live issue and considered possible whilst being GDPR compliant.

Through the integration of engagement, education and enforcement, long term sustainable behaviour change may be made possible through more engagement and education-focused provision similar to the speed awareness course. This would be a shift from the 'stick' approach so often used with litter campaigns. Speed awareness courses in England have been shown to reduce the rate of reoffending by up to 23% in the first 6 months after the course and were more effective at changing behaviour than the fixed penalty notices (FPNs).³³ Durham County Council is the only known local authority which has developed such a course for littering offenders and early indications are that it has been very positively received. Keep Wales Tidy are currently exploring options for a Wales wide programme.

Spotlight on: Durham County Council's Litter Awareness Course

If a member of the public is caught dropping litter in Durham County wardens can issue fixed penalty notices of £100. Similar to well-known speed awareness courses, this fine is reduced to £65 if the offender completes the county's litter awareness e-learning course and pay it within ten days.³⁴

The course consists of a 20-minute session aimed at raising awareness and applies a number of interactive methods and 'gamified' techniques. Satisfactory completion of the course results in a reduced fine.

Current feedback on the course has been wholly positive and provides a unique opportunity to engage directly with offenders. Keep Wales Tidy are considering what a course for Wales would look like and are exploring the options for National and bilingual delivery with Caru Cymru partners.

Key Points

1. The legislation in Wales requires updating to put the onus of the offence on to the driver on a par with other driving offences to facilitate enforcement action for littering from vehicles.
2. Enforcement can be a useful tool, particularly in urban areas or major roads but is not a practical solution for rural or remote areas.
3. Enforcement signage alone is ineffective unless backed up by a real and visible threat of getting caught.
4. A litter awareness course and other means to address offenders directly will be more effective than enforcement alone by engaging directly with litterers and providing additional options for local authorities where chasing fines are a challenge.

Monitoring and evaluation

Due to the cost and safety implications, monitoring roadside litter is notoriously difficult. Where it is possible, a simple counting method rather than a comprehensive LEAMS type audit is the safer and quicker option so it is likely that some estimates and assumptions would still have to be applied. However, if separate budgets were applied to roadside litter, the costs of frequency of collection and (significantly) disposal, would be a good indication of a reduction over time if cleansing schedules could be regularly applied. Monitoring laybys, rest areas and carparks are easier to evaluate and would be key areas for many interventions discussed in this paper.

There have been indications that AI could be used to monitor roadside litter safely. AI for the purpose of litter collection could have real potential in areas where human surveys are not possible, and on highways in particular, there is already a public acceptance that images are captured by camera and so would therefore not be subject to some of the perception concerns of applying this technology to more urban and pedestrian environments. It should be noted however that many AI technologies for gathering litter data are in the very early stages and whilst this is a quickly growing market, it is too early to recommend this as a solution, especially considering the high costs of applying this technology at this stage.

Keep Wales Tidy, in partnership with Hubbub and Ellipsis Earth are planning to trial the use of AI for monitoring roadside litter in Cardiff in early 2022. This paper will be updated with the results upon completion.

Even without a complete and accurate picture of litter data on our roadsides at this time, roadside litter is of increasing concern to both the public and local authorities and highways authorities. For the time being, the anecdotal evidence should be taken at face value and tackling the issue should remain a strong priority.

Key Points

1. Monitoring high speed roads is not feasible but rest areas and laybys are much easier to collect data from and are recommended as key areas for interventions
2. Emerging technologies could play a role in gathering data on litter on roadsides in the future but are still in the very early stages of development.

Appendices

Trunk Road Agency and Local Authority Responsibilities

There have been issues arising in many parts of Wales where it has become apparent that the responsibilities for certain sections of road are unclear as to whether it falls to the respective Trunk Road Agency or the Local Authority. This includes and extends to responsibilities for street cleaning as well as activities such as litter picking, sweeping of litter, removal of graffiti, fly tipping, fly posting and dead animals in both urban and rural areas.

A recent review by the WLGA considered the relevant legislation including the Environmental Protection Act (1990), COPLAR (Code of Practice for Litter and Refuse), Law Wales and Trunk Road Agency work guidance and publications. They concluded that the roles and responsibilities were not clear and there is a need to review activities.

This issue has also been raised through Keep Wales Tidy's own roadside litter research in interviews with Local Authorities and Trunk Road Agencies and is yet to be resolved for existing roads (although note current work is being developed which will apply to new road developments). This issue is not confined to Wales and is shared across the UK as much of the key legislation that pertains to the responsibilities are UK wide.

It is recommended that a consistent approach and agreement for these areas are reached, not just for the purposes of litter and cleaning but from a safety aspect too. The quickest way to resolve this is for Trunk Road Agency's and Local Authorities to review each section of relevant road and agree responsibilities on a case-by-case basis although there is likely to be contention and may require independent moderation. In the longer term, official clarification of responsibilities could be adopted through the revision of COPLAR which is expected to be reviewed in Wales by 2025.

In addition, clarification of responsibilities will be a critical for the introduction of Extended Producer Responsibility (EPR) payments for litter if they are to be introduced.

A55 Trial Signage





Equality and Diversity Issues with Public Toilet Closures

Although only an estimated 2% of lorry drivers are female, the closure and / or lack of maintenance of public toilets is an increasing issue for minority groups and local authorities should consider the impact on women and those with disabilities as an intrinsic part of the process of decision making in regard to public facilities³⁵.

In the UK, 50% of public toilets were closed between 1995 and 2013³⁶ and studies have shown a parallel increase in referrals for urinary tract infections and associated gynaecological problems³⁷.

Portable Toilets for Commercial Drivers

It is a last resort proposition that portable toilets should become standard installations in commercial vehicles with long journeys or overnight stops with sufficient storage space like HGVs. Although this may be unpopular with some drivers, these portable toilets could be used in

situations when there are no suitable alternatives. Not only could this help address the roadside bodily waste issue but provide a more dignified and safe approach to a basic human need.

Portable vehicle toilets must meet certain standards to encourage use and prevent waste being discarded at the roadside as is currently the problem. Reasons why toilet waste would be left at the roadside are that it is smelly, unhygienic and to prevent leakage into the vehicle. Therefore, adequate quality portable toilets are needed to prevent these issues with particular focus on being well-sealed post-use and containing odour-reducing insertions in bags. For travel use, chemical toilets probably will not be suitable as the liquid could escape during movement and proper disposal is limited to tipping the contents into toilets, which are unavailable/inaccessible to commercial drivers. Bagged waste, however, can be emptied into bins discretely as long as sufficient disposal facilities are provided by Local Authorities.

It appears adequate standard vehicle toilets are already available and at affordable prices, however, many odour-reduction techniques appear to be makeshift, like cat litter for example, with wood pellet cat litter featuring as a popular environmentally friendly suggestion. Research and development in this area may help create a better-quality product for the purpose of commercial drivers which may help broaden acceptance of emergency vehicle toilets in the future and prevent the need to waste to be left at the roadside. It must be emphasised that these are a last resort for when proper facilities are unavailable and planning in advance is unsuccessful.

International Tourist and Commercial Driver Language Considerations

One in eleven visitors to Wales are international tourists and of these, around a quarter are from English-speaking countries like Ireland and the U.S.A. Of the remaining three quarters, visitors speak a mixture of mainly European languages³⁸. However, 50 percent of all international tourists coming to Wales visit SE Wales³⁹, so mainland European language messaging should be focussed here if it's felt they are needed. It's probable that ports and ferry terminals would see the highest concentrations of foreign language speaking commercial drivers from mainland Europe so foreign language messaging may also be useful here.

Commercial Drivers Survey Questions

Double click to view Adobe Acrobat file.



Roadside Litter Survey 2021 - Lorry & Commercial drivers

We'd like to know your thoughts about roadside litter...

Keep Wales Tidy would like to know more about your experiences driving on our roads and your thoughts on litter and waste.

Survey responses are anonymous and we will not use this survey for any other purpose other than to inform our research and campaign work and no individual data will be recorded or stored.

This survey is aimed at those who drive larger vehicles for work or other commercial basis, such as a lorry, HGV or truck. Within the survey we'll refer to this as 'your vehicle'.

This survey should take around 5-10 minutes to complete.

If you would prefer to fill out this survey in Welsh, please send an email to comms@keepwalestidy.cymru



Roadside Litter Survey 2021 - Lorry & Commercial drivers

* 1. On a scale of 1 – 10, how much of a problem do you think litter is on roadsides?

0 5 10



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