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Summary

Litter on our roads, thrown from cars or accumulated from vehicles, workers or other means is a blight on our otherwise beautiful landscape in Wales. It has a particularly high visual impact which is reflected in the significant amount of complaints and concerns received on the issue by Welsh Government, Local Authorities and from our own network of Litter champions across Wales. Litter on roadsides is costly, difficult and often dangerous to clear and represents a significant cost to the taxpayer.

As well as being difficult to collect, it is also very difficult to quantify roadside litter or undertake an accurate analysis of composition. Although figures from the annual LEAMS surveys can be a good indication of the scale and source of the problem, the surveys do not cover major roads and roundabouts where litter is known to be particularly high.

For this paper, we put a survey to both Trunk Road Agencies in Wales and all 22 local authorities to try to ascertain the costs, amount and scale of the problem. Although breakdown costs were not available from all of the agencies surveyed, we have been able to estimate costs of collection and disposal as an average across Wales although these figures do not adequately represent the more indirect costs of visual disamenity and environmental harm to soils, waterways and wildlife.

In order to provide a comprehensive picture and to support recommendations received from local authority enforcement officers, relevant legislation and enforcement practices are covered. In this report, learning from other countries are included in the 'Spotlight' sections, including the 'Adopt A Highway' schemes which have been running in the United States for a number of decades.

It is reiterated throughout this paper that roadside litter is a multifaceted problem which needs to be addressed at scale. It cannot be separated from our lifestyle choices, our commuter routes and dependence on the car for travel. Car drivers are a particularly diverse demographic and there has been no concerted effort to target them specifically on this issue. For this reason, our recommendations at the end of this paper are equally holistic in approach and cover a broad policy spectrum.



Introduction

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.

Keep Wales Tidy believes that roadside litter is a serious issue of growing concern in Wales as it is often the subject of complaints or queries from the public and a frequent bug bear for the dedicated litter champions and community groups across the country working towards improving their environment. There are significant health and safety issues and costs associated with clearing litter from roadsides, laybys and junctions, which makes it harder to tackle the problem and for cleansing to take place. This paper explores the issues surrounding roadside litter including the impacts, legislation and enforcement and explores possible options to address the issue.

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. A 2014 report found that litter on England's motorways alone costs 'at least £6 million a year to collect and could fill an Olympic sized swimming pool four times over'¹.

For the purpose of this paper, roadside litter is taken to mean any unwanted items which are disposed of which ends up on our roadsides, laybys and highways. More commonly, this comes from vehicles but it may come from any road users. It does not cover the issue of fly-tipping from vehicles as this is covered under separate legislation and involves different motives and therefore requires different interventions. Fly-tipping is covered in other Keep Wales Tidy policy and research papers.

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 600,000.²

Whilst some of the reasons for this include population growth, longer healthy life expectancy, increased employment and the growth of women in work, as well as increased longevity of vehicles and better manufacturing and road safety, our reliance on the car as the dominant mode of transport has a number of impacts on our society and the way we live our lives. 2013 figures show that the vehicles licensed in Wales came to around 5% of the total licensed for Great Britain as a whole.³ This is slightly higher than the breakdown of population for the UK (Wales has 4.8% of the population of the UK) and could be attributed to the rural nature of the majority of the country which makes cars the most convenient and accessible mode of transport.

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 for work or doing the school pick up. Just going about our day to day business, we buy and consume numerous items which are often high in packaging and then needs to be disposed of. Most people do so responsibly, but the few that do not cause the litter that we see so often strewn around laybys, roadsides and junctions. 23% of motorists in England have admitted dropping litter out of their car windows.⁴

Litter on our roads appears a constant and growing concern and poses a real danger to drivers, workers, cyclists and other road users.

Litter anywhere is significantly damaging to the environment and wildlife but there are also much less obvious effects such as the link between litter and crime and anti-social behaviour, business investment, consumer choices, general wellbeing and sense of place. Economically speaking, the impacts of litter are tenfold when linked with the associated

problems of road closures and resulting traffic congestion that are inevitable results of cleaning these areas. This has a knock on effect as the complaint most often heard from businesses, small and large, is that the roads are getting worse and congestion is having an adverse effect on business efficiency.⁵

In Wales, trunk roads and motorways are managed by the Highways Agency (under the Welsh Government) and the remaining roads come under the responsibility of the local authorities in their relevant areas.*

Roadside litter is particularly problematic to collect; there is a genuine health and safety issue due to the proximity of high-speed traffic. This 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'*.⁶

In a time of severe budget restrictions and austerity, it is increasingly unfeasible for local authorities to do this on a regular basis and difficult for other organisations or groups to tackle without additional agreements or policy in place, such is the case for example, in the USA where they have Highway Adoption schemes in place.

* For details on which roads are covered by the Trunk Road Agencies, visit their website:
South Wales Trunk Road Agency: <http://www.southwales-tra.gov.uk/default.aspx?page=10978>
North Wales Trunk Road Agency: <http://www.nmwtra.org.uk/index.php?id=311&L=-1>

Scale of the problem

'The national effort to reduce the roadside litter problem is at present largely fragmented and under researched'

It is difficult to measure the precise amount of litter thrown from vehicles. The annual street cleanliness surveys carried out by Keep Wales Tidy provide a useful snapshot of litter issues in every local authority across Wales, broken down by zone, type, source and other factors. The surveys, now in their 10th year, have demonstrated a relative improvement in local environmental quality over time on our streets. However, due to safety issues and costs, such surveys are not easily carried out along major highways or roundabouts. In a Scoping Study for Research on Littering from Vehicles⁷, commissioned by DEFRA in November 2015, the following knowledge gaps and issues of quantifying the problem of roadside litter were highlighted.

The scoping literature review shows that there is a very limited range of information available on littering from vehicles.

- There is ambiguity in documents and discussions whereby littering, fly-tipping and littering from vehicles are often conflated.
- There is a range of estimates on the costs of clearing up litter and the degree to which this cost is affected by littering specifically from vehicles.
- Some authorities appear unclear of their responsibility for clearing up litter on roads, and there is continuing discussion on whether local authorities or the Trunk Road Agents are best placed to conduct litter clearance on trunk roads.
- There is little known to date about the scale of activity or perceptions about the merits of implementation of the new civil penalty power on vehicle litter in the London Boroughs.
- There is no explicit local framework for an overarching behaviour change strategy or 'logic model' which draws together the legal aspects on littering, the education/persuasion activities at local level (such as campaigns), and routine service provision of the 'binrastructure' with the aim of achieving the intended outcome of a cleaner environment.

Neither is there a monitoring regime that specifically collates data on local environmental quality in such a way as to measure the impact of the strategy in reducing vehicle-related litter.

Although the study was primarily focused on England, the issues are equally applicable to Wales. A further difficulty of measuring roadside litter in Wales is the rurality of many of our roads which are difficult to cover with enforcement or CCTV coverage.

Despite these challenges of quantifying the problem, through conversations with members of the public, local authorities and community groups, Keep Wales Tidy believe that the issue of littering from vehicles is of growing concern to the public.

A rise in roadside litter, or even an increase in perceptions would not be surprising due to car ownership and traffic at an all-time high, leading perhaps to more litterers but also more people seeing the litter. Local authorities have also cut back on expensive roadworks and cleansing, meaning the cumulative amount of litter seen by the public may have increased in some areas. Lastly, the phenomenon of 'food and drink on the go' is relatively new to our way of life. According to EEA statistics between 1997 and 2010, the packaging waste generated per capita increased year on year⁸, despite recycling practices improving significantly and municipal waste overall decreasing over the same period.⁹

As mentioned above, data on roadside litter is difficult to collect and this is not just restricted to the UK. Research by the Transportation Research Board in the US stated that: *'The national effort to reduce the roadside litter problem is at present largely fragmented and underresearched'*, there is a *'...lack of reliable data on the roadside litter problem'* and that *'Publicising the impacts of roadside litter likely would bring greater resources to bear on the roadside litter problem.'*¹⁰

In order to try to assess the extent of the problem in Wales, we carried out a survey with the 22 local authorities and Trunk Road Agents of the Welsh Government). Although the survey asked for data from all agencies, many did not hold data for roadside litter or it was combined with the wider street cleansing or transport budget. Additionally, the issue of

Survey results

The survey had 26 respondents in total. Two responses from each TRA and a response from each of the 22 local authorities. Due to the issue of roadside litter being so multi-faceted, allocation of data and budgets are held with a variety of departments within local authorities, hence, capturing uniform data on this issue has been difficult where two or more departments are involved. However, due to the response rate of every local authority and both TRAs, the results are potentially valuable in providing us with a

roadside litter does not automatically sit with the street cleansing team but can be part of environmental health, transport, local environmental quality or enforcement. It is difficult therefore to get a comprehensive picture of the costs or actual figures but the data provides a snapshot of the problem and the way that authorities are addressing it.

comprehensive overview of roadside litter across the whole of Wales or where figures are not available, a good indication of the scale of the problem. This section looks at the results from the survey, starting with the broad issue of roadside litter and specific 'problem' litter, the amount of litter collected and the costs incurred, procedures and strategies and then collates some of the overall comments and ideas. Possible [solutions](#) are covered in later sections of this paper.

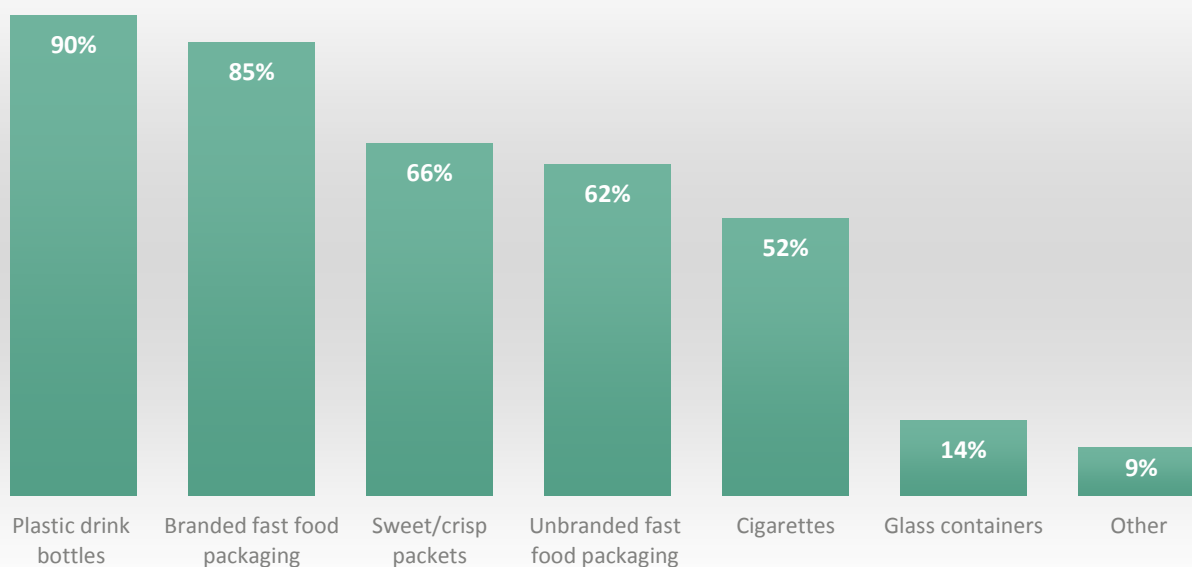


Survey results: Roadside litter

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. This is disappointing given the effort and costs that have gone into cleansing and campaigns although perhaps unsurprising

given the difficulties involved in targeting drivers. Although, no agency has carried out a litter composition analysis of roadside litter, respondents were asked which items they believed were the most littered items. These are shown in the graph below.

Items reported to be the most littered items at roadsides



90% of respondents indicated that they believed plastic bottles to be the most frequently found on roadsides. A recent report by Keep Wales Tidy, drinks-related litter was found to have the biggest impact of any litter type.¹¹ We discuss possible solutions to this issue [later](#) in this report.

55% of respondents indicated that alcoholic beverage containers were found on roadsides with 23% saying that they were commonly found items. Respondents commented that these were a specific problem in laybys and city centres. This may be indicative of a wider

problem of drunk driving and we have recommended that police are engaged in areas where officers have identified this as a common issue.

Enforcement varied across local authorities although many were unable to provide figures and prosecutions for this offence is low, particularly in comparison with other litter offences. Enforcement for roadside litter is more complex than other driving offences and is discussed in more detail in the [legislation](#) section of this report.

Survey results: Amounts and costs

We asked respondents to indicate how much litter has been collected from roadsides (by weight). Some local authorities collected this information and others did not capture it or it was combined with other waste from street cleansing or fly-tipping and so was not recorded. Of the 7 local authorities who could offer this data, the numbers showed slight increase from the year 2013/14- 2014/15. †

When it comes to the costs of collecting roadside litter, the South Wales Trunk Road Agency has indicated that the costs of collection and disposal are circa £400,000 per year. Local authorities were not able to provide accurate breakdowns as this normally forms part of a wider waste budget. Costs of disposal were also normally not separated. It is also worth noting that roadside litter is often too contaminated to recycle and therefore is not contributing to recycling targets and in most cases would be liable to landfill tax (which has recently increased). If drinks containers are making up a significant proportion of the items collected (as the above results would indicate), this not only represents costs for collection and disposal but a potentially significant loss of revenue. The table below shows costs from one local authority who was able to provide us with all of the segregated information we asked for in the survey.

If this can be taken as an average for each authority (and trunk road agency figures), this would mean that collection costs alone represent over £3million per year.

Even if we were to conservatively halve these figures, by 2025, collection costs alone could be in excess of £11 million.

For the Trunk Road Agencies, taking the £400,000 per year indicated in South Wales, and conservatively halving it for the North Wales region, by 2025, the Welsh Government would have exceeded £5.4 million in dealing with roadside litter collection and disposal.

Although costs will vary between each authority, time of year and costs of disposal, it is not disproportionate to estimate that the realistic costs of collection and disposal in Wales each year to be in the region of £3.5 million. If current roadside litter trends continue, this could either decrease as less cleansing takes place due to resource limitations but will also correspond to greater disamenity, social-economic impacts and costs of dealing with complaints from the public, or increase depending on demand and reactive services and increased cost of disposal.

Importantly, these figures represent avoidable cost. They also do not cover the indirect costs associated with litter such as anti-social behaviour, crime and visual disamenity. Two studies undertaken by Zero Waste Scotland showed that the cost of litter on health and social impacts amounted to a staggering £53million in Scotland alone. The associated links between LEQ and crime /anti-social behaviour amounted to a further cost of over £22 million.¹²

Example costs of collection and disposal of roadside litter (not including fly-tipping) from one rural local authority

Period	Collection costs	Disposal Costs
2013/14	£114,000	£8,971.20 (£140/T)
2014/15	£117,000	£8,533.97 (£116.33/T)
2015/16 (to August)	£120,000	£7,353.67 (£92.29/T)

† Over all weight reported by some local authorities.
2013/14: 966.98 tonnes per year (7 local authorities only)
2014/15: 1106.48 tonnes per year (7 local authorities only)
2016 (to August): 408.11 tonnes (8 Local authorities)

Significantly, it also does not adequately reflect the unsafe environment and the danger posed to workers when collecting litter from busy roadsides. In the period from 2013/14 to August 2016 there were **34 accidents** or injuries to workers whilst carrying out their duties. Fortunately, no fatalities have been recently recorded in Wales but there has been a death of Highways England traffic worker this year whilst undertaking roadworks on the M1¹³. Recorded accidents range from injuries due to broken glass to collisions but represent the significantly high risk to workers when undertaking work at roadsides. Verbal abuse

was also highlighted in this section on the survey but have not been recorded in the figures. Not all local authorities responded to this question (it is likely that the data was held by different departments) and so this figure could be higher.

An additional cost which is also not captured in the figures above was dealing with complaints on this issue. Most local authorities, and including the TRAs, indicated that they received complaints about this **weekly** with some recording up to around **500 per year**.

Survey results: Strategies and procedures

In all cases, the local authority is the agency that carries out roadside litter cleansing. Only four had agreements in place with community or probation services, although in some areas there was an agreement for these agencies to carry out grass cutting on verges. One local authority has employed private contractors to undertake litter picking and grass cutting as part of the contract and many worked with community groups in the area (although no official agreements are in place).

Most local authorities had strategies in place which took grass cutting into account when considering timings of roadside cleansing, although this varied depending on how closely the cleansing and highways team were linked within the local authority. There was less of a link between street cleansing and roadside construction and maintenance operators, although many cited that they would cooperate wherever feasible to do so.

The question on whether there is a strategy for roadside cleansing brought up some interesting examples and challenges. The frequency of collection varied significantly from fortnightly to twice a year with some highly coordinated examples and some taking a more reactive approach. Although encouraging that departments are largely coordinating this work, the issues around health and safety and road closures, response times and so many departments being

involved means that strategic roadside cleansing is often hard to practice. Wherever possible (and relevant), the work is coordinated with the TRAs, although some highlighted that this was an extra agency to consider when planning operations and cost time.

'Coordinate with cutting of grass. Grass cutters pick up litter. Local Authority both services. Can't pick up litter within 1.5m of road on roads over 40mph - part of H&S act?? Means higher costs, mobile closures, and more departments. Take longer to act on roadside litter'. [sic]

'About 50% is strategically dealt with grass cutting teams'.

'There is a LEQ Strategy which includes road litter collection. Co-ordinated plans for maintaining high speed routes are put together every four months or so'.

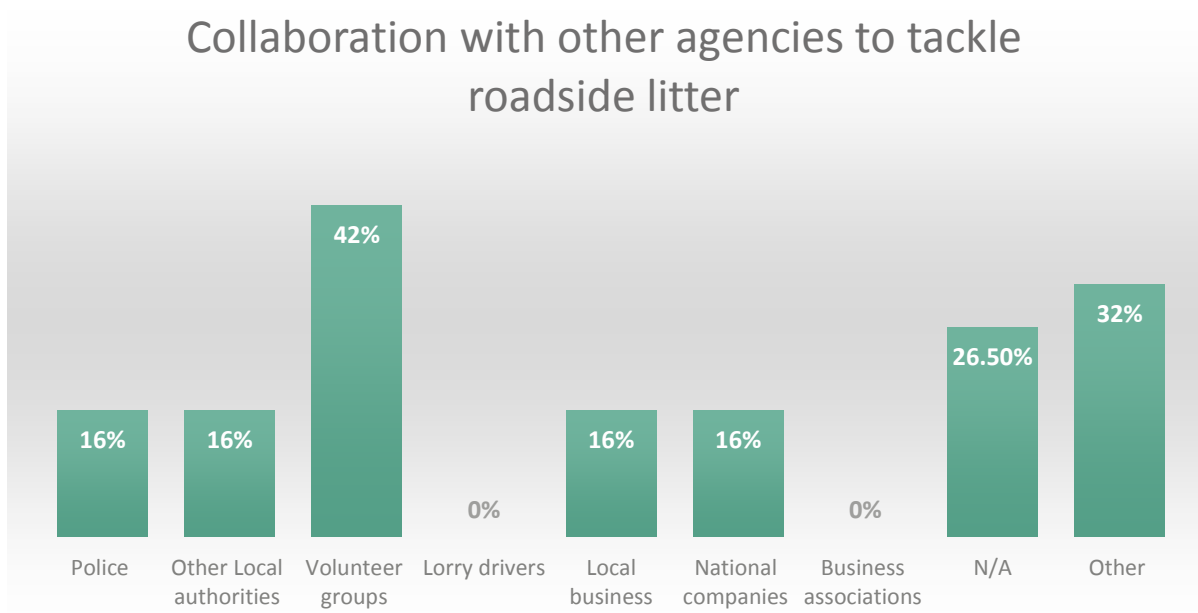
'Roads that require traffic management have agreed frequencies of litter clearance, other roads are cleansed based on need and managed by the zone supervisor. Where possible, trunk road litter collection is coordinated with SWTRA operations to minimise lane closures'.

'We do have a plan in place, although this isn't always possible to execute due to staff numbers'.

Survey results: Working collaboratively

Survey respondents were asked who they have collaborated with to tackle the issue of roadside litter. This showed that, with the exception of community and volunteer groups, collaboration on the issue with external agencies was relatively low and indicates opportunities for future partnerships. However, it should be noted

that in most cases, these surveys were input by just one local authority department and it is possible that agencies are working with other departments but are not aware of the work. 'Other' responses included Welsh Government, Keep Wales Tidy and Drug & Alcohol groups.



Survey results: Bins in laybys

A third of local authorities have indicated that they have bins in the majority of laybys and 52% have 'a few' in strategic areas. The remaining authorities said that they do not have bins in laybys anymore due to the costs and complexities of emptying them. When asked whether bins in laybys reduced or worsened the problem, respondents were split precisely with 42% indicating that they reduced litter and 42% saying they thought they made the problem worse with the remainder saying that it made no difference. A few respondents referred to them as a 'necessary evil', citing that the cost of emptying and the cost of cleansing were required whether they were present or not.

'Many laybys have litter bins but due to the ever increasing pressures on resources we

may consider removing bins from laybys in instances where there are no retail outlets in the vicinity/picnic areas etc. This is on the basis that many bins are misused by persons unknown (often to dispose of household waste since limits were introduced on what is collected by the domestic refuse collection service). There is an argument to say bins in these locations attract additional refuse/litter that can then spill over into the wider environment. If motorists pull over in their vehicles for whatever reason why should they necessarily expect there to be a bin in the layby - people need to take their litter home'.

'If we didn't have bins in some of our laybys along our dual carriageway we would have an excessive issue with the depositing of litter and fly tipping - so we have placed wheelie bin

in our laybys to deal with the amount of rubbish that is deposited which is mostly from Lorries that are parked overnight’.

‘Although litter bins in laybys can be very useful, they can also be a focal point for fly-tippers and their use in rural areas is generally avoided, although there are exceptions, particularly on urban laybys with bus stops, and some tourist routes’.

‘Accept bins in laybys as a necessary evil to avoid criticism’.

‘As the Trunk road networks in North Wales can be considered to be local, haulage and tourist routes the use of laybys can be

considerable, especially overnight (parked up lorries) which can cause littering issues at certain laybys. Current Welsh Government policy is not to provide bins at these locations although some exist historically’.

‘They make the issue better in most cases, although it’s important that the manpower is available to empty them frequently’.

Fly tipping instances have been cited frequently on this topic although there is currently no data to confirm whether bins exacerbate or help this issue. Keep Wales Tidy are looking into further research on this issue in conjunction with Fly Tipping Action Wales.

Survey results: Observations and comments

Many local authorities are concerned that the issue of roadside litter is going to get worse:

‘Cuts and fewer resources mean that the problem is likely to get worse’.

‘Reductions in Local Government grants has made it more difficult to effectively manage and remove litter’.

‘Landfill is expensive nearly £130 per tonne. More reactive now - less planned because budget. The cost of disposal significant’.

Ideas from survey respondents as to how to tackle the issue have been incorporated into the [actions](#) section of this paper. There was a general feeling that fast food outlets should be taking more responsibility.

‘Suppliers - packaging - producer responsibility [need to] link in with new developments such as [supermarkets] to manage their areas. [We] have done this via section 106’.

‘Go for businesses - they need to take responsibility. Give them the bill! Target shops / businesses’.

Changes to enforcement legislation was also felt necessary by a significant number of respondents:

‘Welsh legislation should be updated’.

‘The ability to prosecute (FPN) registered owners of vehicles in relation to littering from vehicles’.

‘the police need to take littering as seriously as speeding, road side signs warning of litter fines throughout the road network in Wales, change the law so you can FPN the vehicle owner for littering from a vehicle even if it’s a passenger’.

Although preferred changes to responsibilities (of the Local Authorities and the Welsh Government) was less clear in the survey comments, greater coordination in some areas with the TRA’s is needed and a some felt that the duties should be changed:

‘Place responsibility for litter on trunk roads with Welsh Government so that local agencies i.e. SWTRA have the responsibility and option to carry out clearance in coordination with other works they organise such as grass verge cutting etc as they do on motorways.’

There was significant widespread agreement that a national awareness campaign was needed on this issue and more signage is needed to raise awareness on strategic routes.

‘Nudge’ campaign. Signage on strategic routes’.

‘National coordinated awareness campaign’.

'It's probably a very small proportion of road users that are littering, so national campaign would be needed as local campaigns are unlikely to pick up many offenders'.

Local authorities have seen significant cutbacks in recent years and the costs associated with roadside litter is increasingly prohibitive to authorities delivering other vital services. This is particularly the case when taking into account the associated costs of health and safety and risk to workers, public complaints, loss of revenue and the impact on health, property values, crime and anti-social behaviour.

Local authorities and the TRA's are largely coordinating efforts to clean up these areas although this is a multifaceted issue and often

involves many departments and agencies to deliver this service. This is time consuming, extremely costly and puts workers at risk. As traffic is on the rise and the propensity for 'food on the go' increases, new solutions are needed before litter on our roads is simply considered part of the landscape of Wales and an accepted cost to the taxpayer.

All litter is an avoidable problem and education, enforcement, engagement and policy and legislation all have a part to play. However, roadside litter is more complex in nature as it is not simply one demographic or one litter issue so campaigns require careful forethought and targeting.

Legislation

Responsibility for road construction, maintenance and management is devolved to the Welsh Government. The Welsh Government is the highway authority for over 1,000 miles of trunk road and 75 miles of motorway network¹⁴. There are two Trunk Road Agencies operating in Wales on behalf of the Welsh Government covering North and South Wales respectively.

In Wales, the two Trunk Road Agencies only have responsibility to remove litter from motorways and a specific section of the A55. The trunk road agencies do have other responsibilities for roads within their remit although these responsibilities do not cover litter. Litter on all other roads, including other trunk roads, is the responsibility of the 22 unitary authorities (as litter authorities). This responsibility is set out in Section 89 (2) of the Environmental Protection Act 1990.

The Code of Practice on Litter, Refuse and Associated Guidance 2007¹⁵ (COPLAR) provides guidance on the discharge of duties as given in the Environmental Protection Act 1990¹⁶ (applicable to England and Wales only). Of particular relevance to this paper are parts 89 (1) and (2) of the Act, which amongst other things, imposes a duty on the Welsh Government and local authorities to keep clean public highways for which they are responsible.

The COPLAR 2007 seeks to encourage duty bodies to maintain their land within acceptable standards. It outlines what might be considered by a court of law to be practicable on different types of land. The code also provides response times by which duty bodies are expected to return land to an acceptable standard, should the land fall below the standard. For the purposes of this paper, the relevant sections of the guidance relates to 'low intensity of use' and 'special circumstances'. Motorway and trunk road roundabouts and lay-bys, approach and slip ways connecting to these roads are deemed to be low intensity of use and as such should

be returned within 14 days to grade A standard if they fall below grade B standard (an explanation of LEAMS grading can be found in the [Appendix](#)). Meanwhile carriageway, verges and central reservations of motorways and trunk roads should be returned within 28 days or as soon as reasonably practicable (subject to health and safety considerations) to grade A standard if they fall below grade B standard. However, the COPLAR 2007 acknowledges that safety issues are paramount. With some exceptions, we know that these guidelines are not always followed as some areas are only able to schedule cleansing twice a year and many are being forced to cut their schedule due to high intensity of the work, staff resources and costs involved.

The COPLAR 2007 meanwhile accepts that those areas of motorways which are deemed to be of low intensity of use (including roundabouts at motorways and trunk road intersections, run-on and run-off roads and laybys on trunk roads) often have slow traffic flows and are the most littered. It is suggested that such areas can be relatively easy to manage although in practice, this is not always the case. Roundabouts for example, may require more than one road closure at a time and junctions will often require diversion routes.

It is recognised that, even since the 2007 guidelines were written, the problem of roadside litter and indeed overall traffic on the roads has increased and although authorities work to achieve these standards, it is not always possible to execute in practice. Costs of safety procedures and wider economic impacts on business and communities of road closures make it difficult to carry this out to the letter. Whilst the standards are crucially important to maintaining good local environmental quality, it is recognised that social norms are changing and therefore different interventions and preventative solutions – as well as maintaining cleansing standards – are required to address this problem.

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).

Witnessing, identifying and proving the offence of litter from vehicles, particularly when they are moving, is difficult. 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. As with all enforcement procedures, it is vital to have the legal functions within the authority to back up

the enforcement action and for many, this is a rather cumbersome and resource-heavy process. Keep Wales Tidy understands that this is an issue for some local authorities who can sometimes struggle to see through the whole process of enforcement.

In England, an [addition](#) to the Antisocial Behaviour, Crime and Policing Act (2014) includes the option for civil penalties for this offence but this does not currently extend to Wales. This has had mixed reactions in England as some feel that civil sanctions lack the teeth and effectiveness you have with criminality.^{17 §} The effectiveness of the civil penalty introduction, which was introduced early in the City of London has not yet been assessed.

Spotlight on: Braintree District Council, Enforcement-related car litter campaign

Braintree District Council has relaunched the campaign for the third time this year. The Tosser Campaign has 2 messages – 'Don't be a Tosser' aimed at those who offend informing them that there is a £75 fine for dropping litter; and 'Report the Tosser' aimed at members of the public encouraging them to report offenders by giving the council the vehicle registration number and relevant details so the Enforcement Team can follow it up. Results of the council's earlier Tosser campaign:

'Since the first 'Tosser' campaign appeared in early 2012, a staggering 339 reports have been received from the public. 33 of these were last month after the launch of the 'Pain in the Butt' campaign, which is specifically aimed at those who throw cigarette butts from vehicles. 117 Fixed Penalty Notices have been issued, 99 warning letters and others are still under investigation. To date, the maximum penalty given to a member of the public for a vehicle litter offence in the Braintree District was £717.50 (fine and costs) awarded by the court. Monitoring results showed an overall average of 55% drop in car litter, with some areas showing 100% improvement. And in the Council's on-line poll, over 2000 people said they would report a car litter offender if they saw one.'

Braintree Council:

https://www.braintree.gov.uk/info/200344/green_heart_of_essex/620/tosser_campaigns

Information on FPN's: <http://www.cleanhighways.co.uk/legislation/fixed-penalty-notices-penalty-charge-notices>

^{‡‡} Statements provided voluntarily in compliance with section 9 of the Criminal Justice Act 1967

[§] Although criminal options remain under the EPA 1990.

Interventions and solutions

Innovation in messaging for roadside litter is more difficult than addressing behaviours on the high street due to the clear requirement to avoid distraction of the driver. Furthermore, it is particularly difficult to monitor such campaigns and their effectiveness due to safety concerns of working on busy roads. The English Highways Agency (HA) (now known as Highways England) has carried out regular anti-litter campaigns. For example, the Highways Agency litter behaviour change marketing campaigns had the target message in August 2011 of 'bag it and bin it' and 'bin your litter other people do'. In February 2012 they used 'help stop litter, bin it' slogans. Evaluation of the impact of the campaign is difficult, but the HA claim that on the M25, East Midlands and the North West following the first 'bag it bin it' campaign there was a reduction of approximately 25% in littering waste.¹⁸ Keep Britain Tidy have launched a new campaign for 2016 to tackle roadside litter in England with the message 'It's no secret what people think of you' which is currently being monitored in several local authorities. The Netherlands^{**} and Belgium also have current national campaigns aimed at raising awareness of littering from vehicles although no monitoring has taken place.

Currently no Welsh local authorities are carrying out specific roadside litter campaigns with the exception of Cardiff who are targeting enforcement on roadsides as part of their wider anti-litter campaign. Monitoring of campaigns, and street litter more generally largely relies on Street Cleanliness surveys (LEAMS)^{††} data although monitoring of cycle ways and footpaths is carried out in some areas as part of improvement plans. All local authorities had highlighted litter campaigns through local press although opinions were split as to whether this had a significant

impact on the ground. 30% said that it had made a big impact, 30% said that it had had a little impact, a further 30% said it had made little difference and the remainder said that they didn't know. Although we know that litter and the visual disamenity it causes really matters to people, the minority continue to act irresponsibly and generic campaigns may not be getting through to drivers in particular.

Many awareness campaigns are not specifically targeted at the motorist but are generalised litter campaigns. A relatively new branch of behavioural science is that of 'traffic psychology', a specialist school which analyses our 'driving mind' and behaviours. Traffic psychologists argue that different psychology needs to be applied to people once they are in charge of a vehicle. A crude example would be the phenomenon of 'road rage' in otherwise calm people. This would indicate that separate, targeted campaigns for drivers would have more of an impact in changing behaviour.

It was noted in the scoping study by DEFRA that education initiatives are aimed at children and young people and not at car drivers.¹⁹ 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. This would be a shift from the 'stick' approach so often used with litter campaigns and would integrate the role of enforcement with engagement. It has not been possible to identify any other locations which offer this option to offenders.

^{**} Netherland Schoon roadside awareness campaign: <https://www.nederlandschoon.nl/wat-jij-kan-doen/terugblik-verkeer-nederlandschoon>

^{††} Local Environment Audit Management Surveys (LEAMS) is the methodology for litter surveying in Wales which KWT, in conjunction with local authorities, undertakes on an annual basis.

Spotlight on: Highway Adoption, USA

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, carparks 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.

The long running scheme has been largely successful in regards to community take up and cleansing although it has not been without controversy. The requirement to uphold the agreement for advertising for groups has been an area of contention when controversial far right groups have signed up to the scheme. Some states response to this has been to allow the group's signage to be displayed but to rename the road after civil rights activists such as the renaming of 'Rosa Parks Freeway' in 2000 in Missouri, although many of these cases went through a legislative process to attempt to stop the signage beforehand, giving rise to accusations of the denial of freedom of speech.

The programme quickly spread to 49 states in the USA and the similar programmes can be seen in Puerto Rico, Canada, New Zealand, Australia, and Japan with each area modifying the scheme to suit their specific requirements. The scheme in New Zealand, for example, also offers some support for new planting and guarantees disposal of litter and vegetation collected. The AAH in Australia is run by the third sector organisation Keep Australia Beautiful (KAB) under an agreement with their main trunk roads agency. KAB also provides public liability and personal injury insurance to groups through the scheme. Each scheme is run on a regional or county basis, rather than by national government.

Texas Department of Transportation, Adopt A Highway Scheme: <https://www.txdot.gov/inside-txdot/get-involved/volunteer/adopt-a-highway.html> *

Keep Victoria Beautiful, Adopt a Highway Scheme: <http://kab.org.au/keep-victoria-beautiful/adopt-a-roadside/>

Products which could be offered to drivers to encourage responsible behaviour appear to have had a slow emergence on the market. Carbag²⁰ is one such product which provides a mobile recyclable bag in two sizes which can be attached in various ways to the car interior and additionally offers advertising space for companies or campaigns. The product has 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 commercial vehicles.

Further afield, the US and Canada have operated their 'Adopt a Highway' schemes since the 1980s. 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.

The issue of roadside litter cannot be separated from other aspects of our lifestyles, our reliance on the car and the propensity for 'food on the go'.

As such, tackling the problem will require a more holistic approach than traditional interventions to tackle specific types of litter. 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). Recent research has shown that the health benefits of walking and cycling outweigh the negative effects on health of air pollution, even in cities with high levels of air pollution.²¹ The researchers calculated that: *'in practical terms, air pollution risks will not negate the health benefits of active travel in the vast majority of urban areas worldwide. Only 1% of cities in the World Health Organization's Ambient Air Pollution Database had pollution levels high enough that the risks of air pollution could start to overcome the benefits of physical activity after half an hour of cycling every day.'*²²

Investment in public transport is also key to reducing reliance on the car and reducing traffic and emissions. In 2012, Nottingham became the first UK city to introduce a levy on parking in the city in order to fund public transport. The city began taxing commuter parking spaces, after a period where employers were required to license any parking spaces available to their employees. In four years, the new tax has already paid for two tram lines, improvements to the city's railway station, plus support for bus services, and even parking management.²³ A cultural shift in work place organisations which allowed for more home working, flexible hours and the use of local desk office space, rather than a centralised headquarters would also contribute to traffic reduction, increased productivity²⁴ and a healthier and happier workforce. This model, already adopted by Keep Wales Tidy and many other small organisations in Wales also saves on costs and reduces car emissions.



Other forms of 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. 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.

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.²⁶ We list some of the possible actions which we believe could have an impact on roadside litter in the [actions](#) section of this paper. Making the argument for any economic intervention requires a clear cause and effect. The Single Use Carrier Bag Charge, introduced in Wales in 2011, is a good example of how a small economic intervention can have a big impact on individual behaviour and an increase in awareness of environmental and waste issues.²⁷ The charge has had a knock on effect in raising awareness and research by Cardiff University has shown that the public are now more in favour of the policies to address plastic packaging waste (such as a levy on packaging waste or plastic bottles).²⁸

Conclusion

Tackling behaviour should be the main driver for reducing the problem of roadside litter, particularly as there has been little concerted effort to address this problem at scale.

Interventions also need to be considered to increase cleansing without increasing the cost and burden on local authorities.

However, there are also interventions that need to be considered to deal with some of the litter types at source. Fast food litter and plastic bottles, identified as the main litter types found on roadsides in our survey, can be reduced in a number of ways. In cooperation with industry and business, there are a number of options available for local, regional or nationwide schemes which can address these issues and encourage reusable items and more sustainable choices.

This paper has covered the various dangers and concerns surrounding the issue of roadside litter, including the difficulties in accurate surveying of quantities and monitoring interventions.

Aside from the obvious visual impact and damage to the environment and wildlife, roadside litter is a costly and often dangerous issue to deal with and many authorities indicated that the problem was worsening whilst their capacity to respond to issues were increasingly limited due to staff resources.

Although a comprehensive breakdown of costs to authorities was not available in all

cases, conservative estimations based on the given data would indicate that the costs to local authorities and Welsh Government exceed £3million per year in collection alone.

Additionally, in the period from 2013/14 to August 2016 there were 34 accidents or injuries to workers whilst carrying out their duties and this figure is likely to be higher as not all local authorities could provide this data.

These figures indicate a worrying trend. It has been reiterated throughout this paper that roadside litter is a multifaceted problem and therefore, the required solutions need to be holistic in nature and require collaboration between different departments in local authorities and branches of government. Car drivers as a demographic are significantly more diverse than other potential 'litterers' and are rarely the target of educational or engagement campaigns, particularly not at scale. As well as interventions, engagement and campaigns to raise awareness, there is a need to address wider behaviours of car travel and commuter behaviour.

The recommendations at the end of this paper are based on the recognition for a holistic approach to interventions and the consideration of broader policies that encourage active travel.

Recommended actions

Roadside litter is a multifaceted and complex issue which relies on a number of agencies and departments. In order to tackle the problem, the solutions also need to be multifaceted and therefore the following actions should be considered as a holistic approach rather than separate initiatives. **The more of these actions which could be adopted, the more effective they would be.**

Adoption schemes

There are some examples of adoption schemes in the UK but the US system has never been formalised. Many community groups voluntarily adopt areas of roadsides and formalising such a system would guarantee that each group had the correct health and safety equipment in place. It could also provide a source of revenue and local promotion to groups who often struggle to attract funds and new volunteers. There are enough of these schemes in place across the world to share best practice and to choose elements of what would (and would not) work at an all Wales scale. Given the lessons from the US in particular, careful consideration should be given to publicity criteria. Adoption schemes could be administered through the Welsh Government, local authorities or an agency such as Keep Wales Tidy to reduce the costs of cleansing and burden on local authority regimes and attract wider social and economic benefits.

Burden of proof

There is a very strong case for the relevant legislation to be tightened or clarified and be brought up to the requirements for other driving offences such as speeding. Ideally, the Registered Keeper of the vehicle should be held responsible for any littering from that vehicle. A Fixed Penalty Notice would then be served on the owner or keeper, and the only exemption from this Notice would be evidence from the Registered Keeper that another named individual was responsible for the littering. This proposal has received very widespread support from practising enforcement officers and their manager's right across Wales and is considered

necessary if enforcement in this area is to be at all effective.

A change in legislation in this regard would also facilitate collaboration with the police which is currently lacking and could also form the basis of a national awareness campaign. The additional threat of licence points for reoffending would likely have a significant impact.

Referrals for offenders

Similar to the above legislative amendment, if littering were considered as other driving offences there would be a significant opportunity for engagement and education of offenders. As education about litter issues are primarily aimed at young people, drivers are not a targeted demographic. Awareness courses, similar to those that are currently offered for offences such as speeding could go a long way towards targeted engagement and education. According to an extensive UK wide research on the effectiveness of speed awareness courses, *'the results provide evidence that the National Speed Awareness Course produces changes in key psychological predictors of speeding, namely instrumental and affective attitudes, moral norms, self efficacy and intentions...At follow-up, 99% of clients reported that they had applied what they had learnt on the course and 91% reported that they had experienced no difficulty in doing so'*.²⁹ The same principles learnt from the current courses available could be applied to a similar 'littering awareness' course that could be offered as an alternative to fines or licence points. This proposal has also been met positively by enforcement officers who would like to see it extended to FPNs for littering, particularly for young and first time offenders.

Sponsorship schemes and partnering with businesses

Very few local authorities cited that they had partnered with other agencies to tackle the issue of roadside littering. Whilst some local businesses still support the 'adopt a roundabout' schemes, there is a significant

opportunity to engage with the wider business community. It is recommended in both cases that formal agreements are drawn up by both parties which could mirror elements of an adoption scheme (above).

Local businesses - Formal agreements could be developed, similar to those in the US, where businesses adopt a road and pay for cleansing in return for some publicity. Although these do exist in some areas, there is an opportunity to roll this out much wider. Roundabouts are particular hotspots for litter and provide a good opportunity for such schemes, but some may extend to longer stretches of road. This may be particularly apt for rural or valleys areas where roads are difficult to access or local authorities are unable to cleanse on a regular basis. This is primarily a cleansing, rather than preventative solution, although with the right business support, these arrangements could go a long way in raising awareness and could deliver very locally targeted campaigns.

National businesses - There is a great deal of research on how items which end up as litter affects a brand and consumer choice, and most supermarkets and fast food chains are very willing to engage in discussions to limit their impact on the local environment. Very few local authorities had approached these businesses but these relationships represent a significant part of tackling the litter problem at source. In-store efforts to promote awareness of a local issue can 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. Sponsorship (as above) may be an option, although targeted campaigns and awareness, as well as help with cleansing, may also be on the table, depending on the business and their policy for Corporate Social Responsibility. Keep Wales Tidy can support local authorities who wish to approach businesses in this way.

Awareness raising and campaigns

Roadside litter is a huge problem and has far reaching impacts. It is unlikely that the general public are aware of the damage it

causes and the costs involved of roadside litter specifically although we know that litter has a significant visual impact and is one of the top concerns for the public. The message that littering is not a victimless crime is even more relevant considering the number of accidents and injuries caused by roadside litter every year in Wales.

Many awareness campaigns are not specifically targeted at the motorist but are generalised litter campaigns. A relatively new branch of behavioural science is that of 'traffic psychology', a specialist school which analyses our 'driving mind' and behaviours. Traffic psychologists argue that different psychology needs to be applied to people once they are in charge of a vehicle. This would indicate that separate, targeted campaigns specifically aimed at drivers would have more of an impact in changing behaviour.

Mentioned earlier in this report was the difficulties involved in monitoring roadside litter and therefore evaluating whether campaigns are successful in litter reduction. Given the safety risks, effective monitoring would not be feasible on any major roads unless it was done as part of the scheduled cleansing operations. Even then, monitoring would be difficult, sometimes unsafe and would likely be a simple counting method rather than a comprehensive LEAMS type audit 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. Monitoring laybys, rest areas and carparks would be easier to evaluate.

All local authorities had highlighted the issue via local press although none had used local radio. This may be a new opportunity for awareness raising of this issue in particular, as 63% of the UK population have said that they listen to the radio in their car.³⁰

Keep Wales Tidy will consider the options for targeted campaigns at drivers, using some of the more crucial data collected for this report and will discuss the best medium for release. Additional 'tools' could be developed such as

bins for cars which have been relatively slow to come to the public market.

National Awareness Campaign

A national campaign was suggested by many of our survey respondents. Although some are planning on trialling small scale 'nudge' techniques in their area, it was felt that an awareness campaign of this scale needed to be 'at scale' and signage needed to be placed on all strategic routes. A change in legislation (as above) would be a good catalyst for a campaign as signage and social media could highlight that littering from a vehicle is as much of a serious offence as other driving offences.

Any national campaign would ideally be a collaborative effort of Welsh Government, Third sector (including road safety organisations), the police, local authorities and businesses to ensure that the message was covering the variety of demographics and litter sources necessary to target the diversity of offenders.

Strategy and collaboration

Although many local authorities were largely coordinating roadside cleansing with grass

cutting regimes, less coordination was seen with roadworks and construction teams. In addition, some local authorities had regular schedules, whilst others were reactive. The approach necessary depends very much on the local authority and the geography of roads, knowledge of 'hotspots' and traffic density. However, what is very clear in our survey is that collaboration with all relevant departments within the local authority is crucial. Data and budgets for dealing with roadside litter tended to be split between a number of local authority departments and although this is understandable given the multifaceted nature of the issue, it should be noted that because of this, one department's decision will impact on another. An example could be the removal of bins by the waste department could lead to more work by enforcement issuing FPNs for fly-tipping, or roadworks creating an extra issue for cleansing in an area which would normally not need it.

Each local authority should consider the best strategies for their area and this may be an area for further discussion with stakeholders, but some practical recommendations include:



- Where roadworks are taking place, it is often the case that cleansing prior to work commencing is part of the contract, given that we know that roadworks or any area where traffic congestion is high are more likely to suffer greater quantities of litter from vehicles. Local authorities could ensure that cleansing takes place *for the whole duration* of the work being carried out, not just prior. This includes ensuring the removal of any items such as cones and signs after the repair work has taken place.
- Continued coordination with grass cutting teams should be encouraged and wherever possible, scheduled accordingly to take place at the same time. This would go some way to reducing costs and extra health and safety requirements.
- Signage stating the reasons for any road closures or diversions should be erected.
- Collaboration with other agencies will be key to tackling litter from vehicles. 34 accidents in under 3 years for workers should give many people a serious cause for concern. Although these were not all driving related accidents, having a police presence, or collaborating with speed camera vehicles stationed before roadworks or street operations, may serve to calm traffic before it reaches the area that workers are in, to ensure their safety. Over half of local authorities said that alcoholic beverages from vehicles were an issue in their area. It is strongly suggested that where local authorities are aware of this issue, that they collaborate with the police to monitor that area for anyone drinking and driving.
- Keep Wales Tidy are aware that police engagement with LEQ issues is low. Police also have the capacity to issue FPNs to offenders if they witness the crime of littering although in practice, this is seen in less than 10% of authorities in Wales.³¹ Further awareness training for the police in certain areas where they are not already utilised as enforcement may be required and further exploration of how littering could be recorded as a police-recorded offence.

Deposit Return Scheme (DRS) on drinks containers

Many local authority staff indicated the problem of plastic bottles which they believed to be the most frequently littered item for roadsides. Unlike many other materials such as fast food wrappers, these are recyclable. However, if they end up on roadsides for too long they can either make their ways into the marine environment or they can become contaminated so that they are no longer able to be recycled. This presents not only a litter issue but a loss of resource and revenue.

There are currently 17 countries³² which have Deposit Return Schemes in place for drinks containers. Each system is different depending on the countries' needs but there is significant evidence from all of these schemes which show a reduction in littering and positive impacts on kerbside collections. The most recent example has been Lithuania, which introduced a DRS in March 2016 and has already achieved over 70% return rate and created a number of jobs in the new industry. It could also create revenue to tackle other environmental issues or support cleansing in the future. Such as the case in Germany where donations from deposits raise in the region of £7million per year for charities.

Wales was the first country in the UK to introduce a charge for single use carrier bags. There was a positive attitude toward the charge, which increased after its introduction. The charge has had a knock-on effect in raising awareness and research by Cardiff University has shown that the public are now more in favour of the policies to address plastic packaging waste (such as a levy on packaging waste or plastic bottles).³²

Drinks related litter on our streets appears to be increasing³³ and plastic bottles are becoming the new 'plastic bags' in the public eye. Recent focus on the marine litter issue, cuts to cleansing and waste services and pressure from various campaign groups in

³² 17 countries have a DRS in place although some are regional. Regions include: 10 US states, 12 regions of Canada and 2 states in Australia

Europe and the UK⁵⁵ has brought the issue of Deposit schemes for drink containers into the limelight in recent years and appears to be growing in public support.

Other economic interventions

Other economic interventions such as levies or taxes could be considered in the future for other highly littered items. The aim of any environmental economic intervention is always to change behaviour not to make revenue. However, from a recent study on economic interventions across Europe³⁴, almost all have been successful in this regard, the single use plastic bag charge in the UK and Ireland being a case in point.

For roadside litter in particular, a charge could be considered on all 'to go' items, (normally subject to a discount relative to the 'eat in' price) with a clearly created and transparent message which links the item with a potential litter source and environmental harm. Similarly to the single use carrier bag charge, this money could be ring-fenced and could create some small revenue for cleansing or environmental projects.

Active travel and traffic reduction

As mentioned previously in this paper, the issue of roadside litter cannot be separated from other aspects of our lifestyles, our reliance on the car for commuting and the propensity for 'food on the go'. As such, tackling the problem will require a more holistic approach than traditional interventions to tackle specific types of litter. 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.³⁵ Plans for the South Wales Metro, improvement of the rail network and other transport infrastructure must also be combined with intercity walking and cycling routes which are safe, convenient and economical enough to provide the argument for not taking the car.

More home working, flexible hours and the use of local desk office space, rather than a centralised headquarters would also contribute to traffic reduction, increased productivity³⁶ and a healthier and happier workforce. This should be encouraged in all sectors wherever possible, leaving the roads



⁵⁵ Most notably is the current campaign in Scotland: <http://www.haveyougotthebottle.org.uk/>

free for those who need to use them. This could be encouraged through a business award system (e.g. Sustainable Development charter) or promotion of the economic incentives (e.g. office rent reduction).

Hire cars

Drivers of hire cars may have even more of an incentive for littering to avoid any leakage or damage to the hire car company where they may have to pay. Hire car companies should be encouraged to place a rubbish bag in their vehicles with each new lease. This practice, already widely practised elsewhere in the world, would encourage people to think more carefully about their disposal of waste and litter from a vehicle, and would engender an increased awareness of the problem. Keep Wales Tidy will contact hire companies

operating in Wales and Visit Wales to discuss the issue and potential solutions and information required.

Bins in Laybys

Local authorities were split as to whether bins in laybys created or helped the problem of litter and many have got rid of them entirely. More research is necessary to clarify what the situation is and Keep Wales Tidy could undertake some observational research or social marketing initiatives which may help to guide local authorities when they're making a decision on bin placement. Increasingly, we are aware of household fly-tipping ending up in these bins and in laybys, and propose to work with other agencies such as waste services and Fly-tipping Action Wales to explore this issue further.

Relevant policy & legislation links

- [Programme for Government in Wales](#) (2016)
- [Active Wales Travel Plan](#) (2016)
- [Environment \(Wales\) Bill](#) (2016)
- [Wellbeing and Future Generations Act](#) (2015)
- [Climate Change Strategy for Wales](#) (2011)
- [Towards Zero Waste Strategy](#) (2010)
- [Marine Strategy Framework Directive](#) (2008/56/EC)
- [Clean Neighbourhoods & Environment Act](#) (2005)
- [Local Environment Audit & Management Systems](#) (LEAMS)

Appendices

Welsh Government Trunk Agencies – Routes

South Wales Trunk Road Agent - Network Map		North & Mid Wales Trunk Road Agent - Network Map	
Road	Route Extent	Road	Route extent
M 48	Severn Bridge - M4, Junction 23 Plaza.	A5	Bangor to Chirk
M 4	Second Severn Crossing - Pont Abraham.	A40	Abergavenny to Llandovery
A 48M	M4, Junction. 29 - A48 Western Avenue.	A44	Llangurig to Aberystwyth
A 40	England Border at Monmouth - Fishguard.	A55	Holyhead to Chester
A 4042	M4, Junction 25A - A40 Hardwick Roundabout, Abergavenny.	A458	Shropshire Boundary to Mallwyd
A 4060	A470, Junction at Pentre-bach - A465, Dowlais Junction.	A470	Merthyr Tydfil to Llandudno Junction
A 4076	Milford - A40, Haverfordwest.	A479	Nantyllyn to Llyswen
A 4232	M4, Junction 33, Capel Llanilltern - Culverhouse Cross Interchange.	A483	Chester to Sugar Loaf (Llanwrtyd Wells)
A 449	M4, Junction 24, Coldra - A40, Raglan Interchange.	A487	Dinas (Ceredigion) to Bangor
A 465	Llangua - M4, Junction 43, Llandarcy.	A489	Newtown to Machynlleth
A 466	Newhouse Roundabout - A48(T) Highbeech Roundabout.	A494	Dolgellau to Queensferry
A 470	M4, Cyffordd 32, Coryton – A465, Cefn Coed.		
A 477	A40 Junction, St Clears - Pembroke Dock.		
A 48	Chepstow - Carmarthen.		
A 483	Pont Abraham - A40, Rhosmaen.		
A 487	A40, Fishguard - Stand Back Lane.		

Local Environmental Audit and Management System (LEAMS) Methodology

The methodology for the LEAMS surveys reflects the Code of Practice for Litter and Refuse and Associated Guidance (COPLAR) 2007, which relates to Part IV of the Environmental Protection Act (EPA) 1990.

Each survey covers a 6% sample of streets, selected at random from a full list of adopted highways provided by each local authority. LEAMS assesses the quality of the local environment through a visual survey of a 50m length of one side of a street (known as a transect) which includes the pavement and some gutter, by recording the below information.

Overall Cleanliness Grade

This is based on how much litter and dog fouling is present.

A Grade <ul style="list-style-type: none">• No litter or refuse	B+ Grade <ul style="list-style-type: none">• No more than 3 small items of litter	B Grade <ul style="list-style-type: none">• Predominantly free of litter and refuse apart from some small items	C Grade <ul style="list-style-type: none">• Widespread distribution of litter and/or refuse with minor accumulations	D Grade <ul style="list-style-type: none">• Heavily affected by litter and/or refuse with significant accumulations
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References

- ¹ UK Government - Press Release (2014) *£6 million cost to collect litter on motorways – Bag and Bin it*, Highways Agency asks road users, Available at: <https://www.gov.uk/government/news/6-million-cost-to-collect-litter-on-motorways-bag-and-bin-it-highways-agency-asks-road-users> [24/10/16]
- ² BBC News (20 Jan 2016) *Cars on England's roads increase by almost 600,000 in a year*, Available at: <http://www.bbc.co.uk/news/uk-england-35312562> [24/10/16]
- ³ Welsh Government Statistics (Sept. 2014) *Licensing and vehicle ownership*, Available at: <http://gov.wales/statistics-and-research/licensing-vehicle-ownership/?lang=en> [24/10/16]
- ⁴ Local Government Association (2015) *Waste crime call for evidence submission*, Available at: <http://www.local.gov.uk/documents/10180/49956/150506+LGA+Waste+crime+call+for+evidence+response.pdf/2c06c1bd-ea02-4cc2-8524-4e97ca13c099> [24/10/16]
- ⁵ Cole, S (2016) *Moving Wales Forward*, Available at: <http://www.fsb.org.uk/docs/default-source/fsb-org-uk/transport-report.pdf?sfvrsn=0> [20/10/16]
- ⁶ Read, J (10th August 2015) *Winning the fight against litter*, Available at: <http://www.localgov.co.uk/Winning-the-fight-against-litter/39196> [18/08/15]
- ⁷ DEFRA (MEL Research) (2015) *Scoping Study - Litter from vehicles*, Available at: <http://sciencesearch.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=0&ProjectID=19619> [20/10/16]
- ⁸ EEA (EU) (2015) *Generation of recycling and packaging waste*, Available at: <http://www.eea.europa.eu/data-and-maps/indicators/generation-and-recycling-of-packaging-waste/generation-and-recycling-of-packaging-4> [20/10/16]
- ⁹ EEA (EU) (2015) *Waste - Municipal solid waste generation and management*, Available at: <http://www.eea.europa.eu/soer-2015/countries-comparison/waste> [20/10/16]
- ¹⁰ Transport Research Board et al. (2009) *Reducing Litter on Roadsides: A synthesis of Highway Practice*, Available at: <https://www.nap.edu/catalog/14250/reducing-litter-on-roadsides> [20/10/16]
- ¹¹ Keep Wales Tidy (2015) *Drink Related Litter in Wales*, Available at: <http://www.keepwalestidy.org/login/kcfinder/upload/files/Drink%20Related%20Litter%20Report%202015.pdf> [20/10/16]
- ¹² Zero Waste Scotland, (2013) <http://www.zerowastescotland.org.uk/content/true-cost-scotlands-litter-problem> [24/2/17]
- ¹³ Roadworker Safety Forum, (2016), Available: <http://rowsaf.org.uk/> [23/11/16]
- ¹⁴ Welsh Government (2011) *Roads* Available at: <http://gov.wales/topics/transport/roads/?lang=en> [27/10/16]
- ¹⁵ UK Government (DEFRA) (2013) *Statutory Guidance: Code of practice on litter and refuse*, Available at: <https://www.gov.uk/government/publications/code-of-practice-on-litter-and-refuse> [20/10/16]
- ¹⁶ *Environmental Protection Act (1990)* <http://www.legislation.gov.uk/ukpga/1990/43/contents>
- ¹⁷ Clean Highways (Nov 2014) *Evidence to Communities & Local Government Select Committee inquiry into litter*, Available at: <http://www.cleanhighways.co.uk/legislation/fixed-penalty-notice-penalty-charge-notice> [20/10/16]
- ¹⁸ DEFRA (MEL Research) (2015), *Op cit*
- ¹⁹ DEFRA (MEL Research) (2015), *Op cit*
- ²⁰ CarBag (2015) , Available at: <http://www.car-bag.com/> [20/10/16]
- ²¹ *Tainio et al. Can air pollution negate the health benefits of cycling and walking? Preventive Medicine; 5 May 2016; DOI: 10.1016/j.ypmed.2016.02.002*
- ²² *Ibid.*

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- ²³ FastCoExist.com (2016) *This U.K. City's Controversial Parking Tax Shows How To Fund Public Transit*, Available at: <https://www.fastcoexist.com/3064461/this-uk-citys-controversial-parking-tax-shows-how-to-fund-public-transit> Accessed: [20/10/16]
- ²⁴ Ceridian (2006) *Business Practices and Attitudes Relating to Home Working*, Available at: https://www.sdworx.co.uk/downloads/Home_Based_Working.pdf [20/10/16]
- ²⁵ UK Government (Highways England) (2016) *2,000 sacks of litter collected from the main roads in the North East*, Available at: <https://www.gov.uk/government/news/2000-sacks-of-litter-collected-from-the-main-roads-in-the-north-east> [20/10/16]
- ²⁶ Transport Research Board et al. (2009), *Op cit*
- ²⁷ Poortinga, W et al (Cardiff University) (2016) *The English Plastic Bag Charge - Changes in Attitudes and Behaviour*, Available at: [http://orca.cf.ac.uk/94652/1/Cardiff_University_Plastic_Bag_Report_A4%20\(final%20proof\).pdf](http://orca.cf.ac.uk/94652/1/Cardiff_University_Plastic_Bag_Report_A4%20(final%20proof).pdf) [20/10/16].
- ²⁸ Poortinga, W et al (Cardiff University) (2016) *Op cit*
- ²⁹ Brainbox Research (2011) *Evaluation of the National Speed Awareness Course*, Available at: https://ndors.org.uk/files/6614/4983/2018/Final_Speed_Awareness_Evaluation_Report_v1.4.pdf [20/10/16]
- ³⁰ RAB (2008) *Radio and the Digital Native*, Available at: <https://robertoigarza.files.wordpress.com/2008/10/rep-radio-and-the-digital-natives-rab-2007.pdf> [20/10/16]
- ³¹ Keep Wales Tidy (2016) *Fixed Penalty Notices for littering and dog fouling in Wales*
- ³² Poortinga, W et al (Cardiff University) (2016) *Op cit*
- ³³ Keep Wales Tidy, LEAMS Data: 2013/14, 2014/15, 2015/16
- ³⁴ EEA (EU) (2016) EEA Report No 17/2016: Environmental taxation and EU Policies, Available at: <http://www.eea.europa.eu/publications/environmental-taxation-EEA%20Report%20No%2017/2016-eu-environmental-policies> Accessed: [20/10/16]
- ³⁵ Tainio et al. *Op cit*
- ³⁶ Ceridian (2006), *Op cit*



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