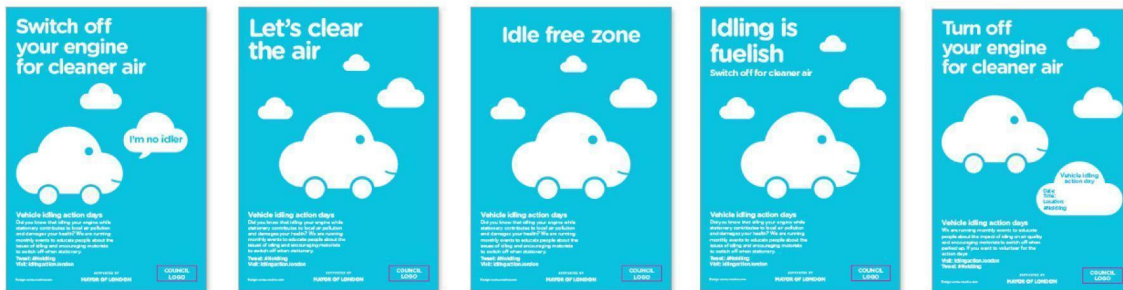




Idling Action London

Research for Idling Action on campaign strategies and messaging

Final Report January 2022



COOLWORLD
CONSULTING

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Executive Summary

The aim of this project was to undertake research which will inform the [Idling Action](#) campaign strategy and help to refine tactics and messaging.

The research project consisted of:

- Reviewing the first 4 phases of the Idling Action campaign: analysing the idling event data, and surveying volunteers about their approaches, tactics and messaging.
- Conducting surveys with drivers, to understand what messages and tactics are most likely to have an impact. This involved surveying:
 - the RAC's driver panel (7,500 members);
 - face-to-face with drivers in London (100+ surveys)
 - an online driver survey (nearly 300 respondents).
- Evaluating and analysing the findings, and producing a set of recommendations for how the Idling Action programme can improve its effectiveness.

Review of Idling Action data and attitudes to idling:

Idling Action interacted with 6590 people (drivers and pedestrians) at events across Phase 1 to 4, between July 2016 and March 2020. The analysis of the data found that:

- There was a small increasing trend in the percentage of drivers switching off from 77% in Phase 1 to 85% in Phase 4, with a small decrease from Phase 2 (82%) to Phase 3 (80%)

According to the Idling Action data:

- Hot spots for idling are: Schools , railway/underground stations , supermarkets/retail/shopping centres , bus stations , taxi ranks , and hospitals .
- Local Authority enforcement of the idling regulations is through Fixed Penalty Notice (FPN), Penalty Charge Notices (PCN) and can also be through using Public Spaces Protection Orders (PSPO), however there is a limitation of current legislation that does not allow for fines to be issued without warning first.

In the volunteer survey, the most popular reasons for why they believe drivers idle are that:

- They don't think they are doing anything wrong
- They are waiting to pick someone up
- They are running the heating and cooling.

When asked an open-ended question about how idling levels could be reduced, 53% of volunteers commented that there needs to be greater awareness (either with signage or an awareness campaign), and increased enforcement and fines for idling offenses.

Findings from Driver surveys:

According to the drivers who were surveyed, the most common reasons for idling are:

- Dropping someone off or picking them up
- Running the vehicle's heating or cooling system
- Just habit

Which messages do drivers think would be most effective at encouraging them to switch off their engine when parked?

- The message rated as most effective by drivers from across all surveys was:
 - *Switching off engines when parked is better for the health of those who work, live and go to school on this street.*
- The message that '*unnecessary idling wastes fuel and money*' was considered the most effective by the RAC panel, but is much less popular in other surveys.
- Health-based messages are considered most effective by online and Face to Face (F-2-F) survey respondents, and also by volunteers.
- The message that idling is illegal and could result in a fine was considered less effective by drivers.

Which tactics would be most effective at engaging drivers?

The tactics historically used by the campaign were:

- No idling banners and other physical signage,
- Advertising campaign talking about the health impacts,
- Newspaper coverage / article in a magazine,
- Volunteers with the local authority approaching cars and asking drivers to switch off.

In the driver surveys, the tactics used by the campaign rated as most likely to engage drivers on the topic of idling were advertising campaigns, then banners/signage.

From analysing the findings it is clear that any campaign needs to use a combination of different tactics and messaging, as there are many different reasons why people idle.

Other findings:

Stop-start engine technology: 5-10% of surveyed drivers have stop-start technology, but have disabled it. Stop-start technology, when enabled, reduces vehicle idling emissions by switching off when stationary. The most popular reasons for disabling it are that they find it annoying or they are concerned it might wear out the battery.

Schools: Many volunteers and online driver respondents suggested targeting schools, both with school campaigns and messaging going home to parents, as well as targeting school gate idling with direct approaches.

Myths: There are still some idling myths / misconceptions that are believed by some drivers, most of which are covered in Idling Action's myth buster. Stop-start impact on engines could be investigated and if found to be a myth, this could be included.

Recommendations

Seven recommendations (listed below) were made which cover campaign messaging and tactics, continuing to address misconceptions, researching stop-start technology, working with fleet and delivery driving organisations to embed no-idling in company policy and annual driver checks, increased sharing of successful approaches and lessons learned with those involved in tackling idling, and expanding messaging to focus on stationary vehicles at traffic lights.

1 Expand the messages used currently in the Idling Action campaign to also include:

- Messages about how idling can waste fuel and money; and
- Harder-hitting health messages.

This is in addition to messages which are used currently, which are:

- Idling fumes can harm the health of those who live, work or go to school on this street;
- Idling can create spikes in pollution where you are parked, and the fumes can affect your own health.
- Idling engines can stunt children's lungs.
- Switching off engines when parked is better for the health of the people who live / work / go to school on this street.
- Idling is against the traffic regulations and can result in a fine.
- Idling can cause asthma, lung and heart disease.

2 Local Authorities and campaign groups should use a range of tactics to engage drivers, as different drivers noted different reasons for why a certain tactic would be more effective for them. They should be prioritised as follows:

1. Advertising campaign
2. Banners and signage
3. Media coverage
4. Volunteers approaching drivers

3 Advertising campaigns and media coverage could focus on tackling the three most common reasons why drivers idle:

- Waiting to pick someone up.
- Running the heating and cooling.
- Just habit / they don't think they are doing anything wrong.

4 Use campaign materials, and the tactics listed above, to bust some common misconceptions which were identified in the research. These include:

- the need to leave the engine on when parked to run the heating and cooling
- switching off and on again will wear out the engine.

Working with organisations that are trusted by drivers, such as the RAC, fleet driver organisations and driving magazines, could help the messages to be spread more widely.

5 Undertake more research into stop-start technology in collaboration with trusted driving organisations, such as RAC. Research is needed into the:

- Impact of stop-start technology on the engine (drivers believe it will wear it out if enabled); and
- Quantification of the environmental benefits of leaving the technology enabled (in terms of air pollution and CO₂ emissions).

There is only a small amount of research published on the topic (Zhicheng Ma et al. 2021) and some is potentially out of date (Gonzalez et al. 2011)¹. If the research finds that the negative impact on the engine is a myth, then this should be targeted in an awareness-raising campaign. This research could be done in collaboration with trusted driving organisations, such as RAC, AA, and Autocar, whilst also looking into research on the impact of stop-start on the battery / engine.

There are 2.6m cars in London², so this research could be used to raise awareness and encourage more drivers to leave the technology enabled, thereby reducing idling emissions. If drivers understand the benefits, they may be more inclined to leave it enabled.

¹ Zhicheng Ma et al. 2021. Research on the effects of idling start-stop function on light vehicles fuel consumption and emission under different cycle conditions. Available at: https://www.e3s-conferences.org/articles/e3sconf/pdf/2021/44/e3sconf_vesep2020_01030.pdf

Gonzalez et al. 2011. Influence of the stop/start system on CO₂ emissions of a diesel vehicle in urban traffic. Available at: https://www.researchgate.net/publication/251670270_Influence_of_the_stopstart_system_on_CO_2_emissions_of_a_diesel_vehicle_in_urban_traffic

² <https://www.statista.com/topics/5192/driving-in-the-united-kingdom/>

6 Local authorities or groups that want to tackle idling should engage with fleet driver organisations (some have already made a start utilising the Idling Action Fleet Engagement resources³) - ask them to create a no-idling policy, and embed it into annual driver checks.

7 All those who are active in tackling engine idling should share best practice, resources and research. This could be done by making resources and toolkits publicly available, and providing case studies showcasing different approaches.

³ Idling Action fleet driver resources: <https://idlingaction.london/business/>

1.0 Introduction

1.1 Aims of the study

The aim of this project was to undertake research which will inform the Idling Action campaign strategy, and help to refine tactics and messaging.

Research questions

This research set out to answer the following questions:

- Which approaches (tactics) used in the Idling Action campaign are most likely to change behaviour long term?
- Which messages used to convince drivers to switch off in the Idling Action campaign are most likely to change behaviour long term?
- What are the most common reasons for idling?
- What are the common pushbacks?

The research was carried out by Cool World Consulting during 2021.

1.2 Methodology

The research was undertaken in four stages.



Stage 1: Review of Idling Action and attitudes to idling

Idling Action data from the Idling Action events in the first 4 phases of the project (July 2016 - March 2020) was reviewed, including the use of tactics and messaging. Idling Action volunteers, who had taken part in an event or had undertaken their own driver engagement activity using Idling Action resources, were asked to fill in an [online volunteer survey](#)⁴.

The findings of this stage helped to inform the development of the surveys for Stage 2.

⁴ Volunteer survey:

https://docs.google.com/forms/d/1qv2isj_91uV9QZGiXgXpSV5q7_y252jsS8F_6y0Chlw/viewform?edit_requested=true

Stage 2: New Research

In this stage we conducted new research into attitudes of drivers, and what messages and tactics are most likely to have an impact. This was done by surveying a large sample of drivers.

We developed a survey for drivers, which was delivered face-to-face with drivers in London (115 surveys), via the RAC's opinion panel (7,500 members), and an online driver survey (289 respondents). The surveys sought to understand the main reason for driving, levels of awareness of idling, what messages were most compelling and what tactics they thought would convince them to turn off their engines.

Stage 3: Evaluation

We undertook a critical analysis of research findings from Stage 1 and 2 to identify what worked well, and what could be improved in the Idling Action programme to maximise the effectiveness of the campaign, as well as for other idling campaigns across the country. We also identified gaps in knowledge and 'grey areas' that need to be addressed. This report constitutes the output of the evaluation.

2.0 Background research: Analysis of historic idling action campaign

This section of the report details the review of Idling Action's existing data from July 2016 to March 2020, and the findings of surveys with existing volunteers.

Specifically, this involved:

- Reviewing and analysing all data collected since the Idling Action campaign began.
- Reviewing and analysing yearly reports.
- Compiling lists of all messages and tactics used by the campaign.
- Analysing breakdown of data into types of vehicles that are idling - cars, fleet drivers, taxis, vans etc.
- Sending out a survey to Idling Action volunteers who have attended events previously.

The list of documents reviewed are provided in Appendix 1.

2.1 Historical Idling Action event data review

Idling Action provided the following description of Idling Action events:

The Idling Action project includes delivery of Idling Action events, in which teams of volunteers, local authority officers and project staff work at an identified idling hotspot and engage with both motorists and pedestrians, to educate them about the dangers of air pollution produced from vehicle engine idling, and specifically to ask idling drivers to switch off when safe and possible to do so. The project is also delivering school anti-idling workshops, engaging with businesses and offering vehicle fleet training.

The Idling Action campaign focuses on drivers who leave their engine running while stationary when pulled over or parked. It does not focus on drivers who are idling in traffic.

Idling Action campaign considers idling hotspots to be such places as schools, railway stations, bus stations and high street shopping locations. Many of the Idling Action events are targeted at these locations.

2.1.1 Summary of data

The existing data July 2016 to March 2020 was from four phases: Phase 1 (2016-17), Phase 2 (2017-18), Phase 3 (2018-2019) and Phase 4 (2019-2020). Whilst Phase 4 runs until March 2022, the data was truncated at March 2020 when Covid-19 government restrictions prevented events taking place, hence fewer events in Phase 4 than previous phases. The same resources were used throughout the four phases, which were spread over an increasing number of boroughs as more became involved.

Overall headline numbers related to idling are provided in the following table:

Metric	Phase 1	Phase 2	Phase 3	Phase 4	Total
Number of action events that have taken place	58	48	55	35	196
Number of idling drivers that switched off when engaged with during Idling Action events	874	768	537	289	2,468
Number of interactions with drivers and pedestrians at events	1969	1,818	2,086	717	6,590

It is noted that at Idling Action events, areas of known idling and generally busy areas are targeted, and volunteers are encouraged to engage with idling and non-idling drivers alike. These numbers therefore do not represent a random sample of the numbers of drivers idling at the time of the anti-idling event.

In the following sub-sections we evaluate the data for driver and pedestrian interactions.



2.1.2 Year on year comparison

Phase 1 of the Idling Action Campaign ran from July 2016, Phase 2 from June 2017, Phase 3 from June 2018 and Phase 4 from October 2019 to March 2020 (truncated due to Covid-19).

The following boroughs were involved through each phase:

- Phase 1 - Camden, City of London, Enfield, Hammersmith & Fulham, Harrow, Islington, Kensington & Chelsea, Lambeth, Southwark, Tower Hamlets, Wandsworth and Westminster.
- Phase 2 - Those above and Croydon, Greenwich, Lewisham, Richmond, Waltham Forest.
- Phase 3 - Those from Phase 2 and Brent, Hounslow, Merton.
- Phase 4 - Those from Phase 3 and Barking and Dagenham, Bexley, Ealing, Hackney, Haringey, Havering, Hillingdon, Kingston-upon-Thames, Newham, Redbridge, Sutton.

The following table shows phase by phase comparison of total interactions with drivers and pedestrians, number of those who were idling drivers, percentage of idling drivers of the total interactions (and the minimum and maximum percentages from individual boroughs), the number of idling drivers that switched off when requested, and the percentage of idling drivers that switched off when requested (and the minimum and maximum from individual boroughs).

	Total Interactions	Idling Drivers	% Idling, Min-Max	Switched Off	% Switched Off, Min-Max
Phase 1	1969	1132	57% (26%-82%)	874	77% (62% - 91%)
Phase 2	1818	935	51% (8% - 69%)	768	82% (54% - 100%)
Phase 3	2086	670	32% (0% - 69%)	537	80% (50 – 100%)
Phase 4	717	342	48% (15 - 100%)	289	85% (44% - 100%)
Total	6590	3079	47% (12% - 77%)	2468	80% (66% - 100%)

The large range in the percentage of idling drivers across the four phases appears to reflect the range of locations targeted, and that volunteers are encouraged to engage with idling and non-idling drivers alike.

It is encouraging that on average, throughout the four phases of Idling Action, 80% of drivers switch off when asked to during events. There is a small, yet statistically significant increase in the percentage of drivers switching off from 77% in Phase 1 to 85% in Phase 4, with a small decrease from Phase 2 (82%) to Phase 3 (80%).

2.1.3 Types of vehicles

The interactions were noted per type of vehicle driver such as ambulance, bus, car, coach, fire engine, minibus, minicab, motorcycle, police, taxi, truck and van, or pedestrian.

The overwhelming number of drivers noted during interactions were car drivers – 35% of the total in Phase 1, 50% in Phase 2, 69% in Phase 3, and 82% in Phase 4. This is likely to reflect the increase in outer London borough and school locations over the course of the campaign.

There is some evidence that the Idling Action message is getting through and making a positive change to reduce some types of drivers idling. In Phase 1, 72% of the car drivers who were engaged by volunteers were idling, 69% in Phase 3 and by Phase 4 only 45% of car drivers were idling. Similarly, 64% of interactions in Phase 1 were with taxi drivers, 59% in Phase 3, and 50% in Phase 4.

By Phase 4, car drivers made up 82% of the interactions and vans 10%, with all other driver types and pedestrians less than 3% each. There was an average of 47% driver idling rate from all the interactions however, only 45% of car drivers were idling. That meant that all other driver types had much higher incidents of idling though constituting individual low numbers. Of the interactions, the proportion of idling drivers recorded in non-car vehicle types were 67% of van drivers (50 drivers), 100% of truck drivers (1 driver), 80% of minicab drivers (8 drivers), 50% of both taxi drivers (9 drivers) and coach drivers (1 driver). It is noted that taxi driver idling rates are lower than the rest of the professional drivers.

A small number of police and ambulance drivers were also noted as idling, however these drivers are subject to a number of exemptions from the idling law.



2.2 Volunteer Survey Results

An online google forms survey was sent to all volunteers on Idling Action's volunteer database and was promoted on twitter. 49 people responded.

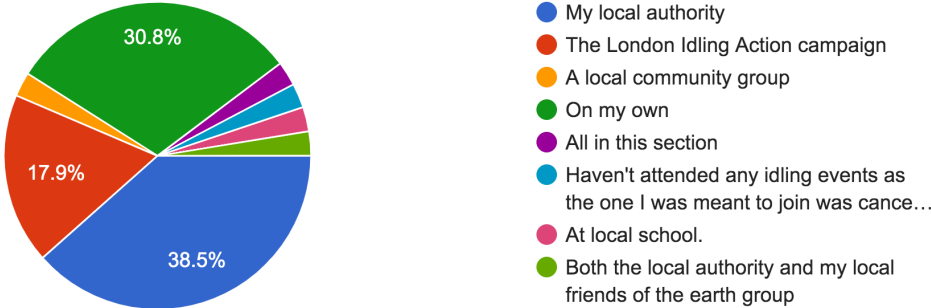
It is worth noting that:

- The majority have attended events with Idling Action and / or their local authority, however some respondents have only done it on their own and therefore may not have had Idling Action volunteer training.
- There was a spread of volunteers from many different boroughs in both inner and outer London.

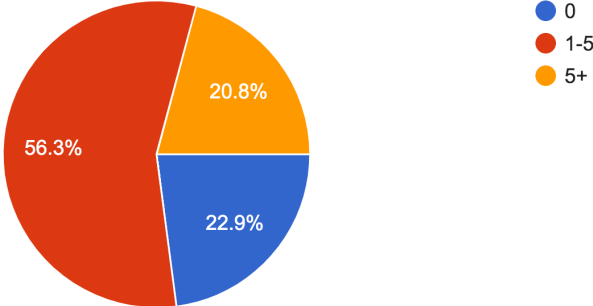


The survey results are displayed below. The first 3 questions ask about the respondent.

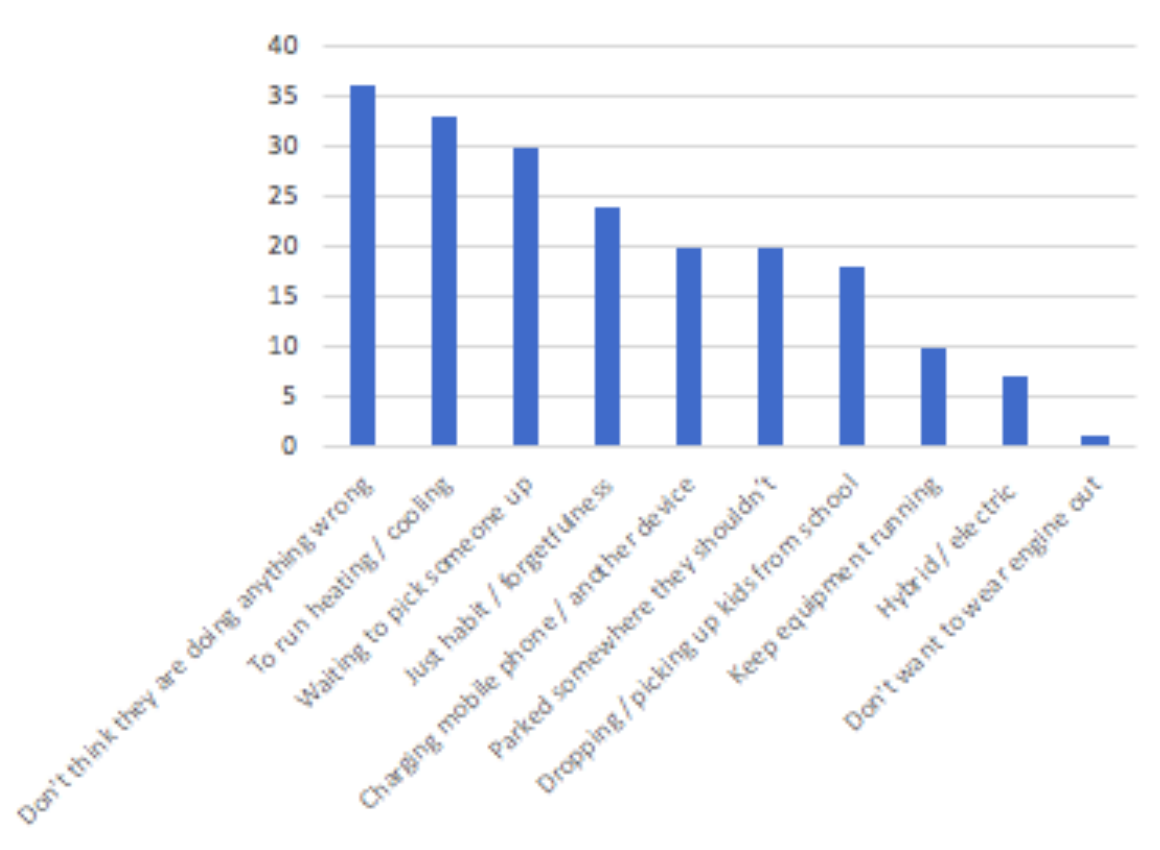
Q1: Who have you undertaken idling events with?



Q2: How many idling events have you attended?



Q4: In your experience of engaging with drivers, what do you think are the main reasons why drivers idle?

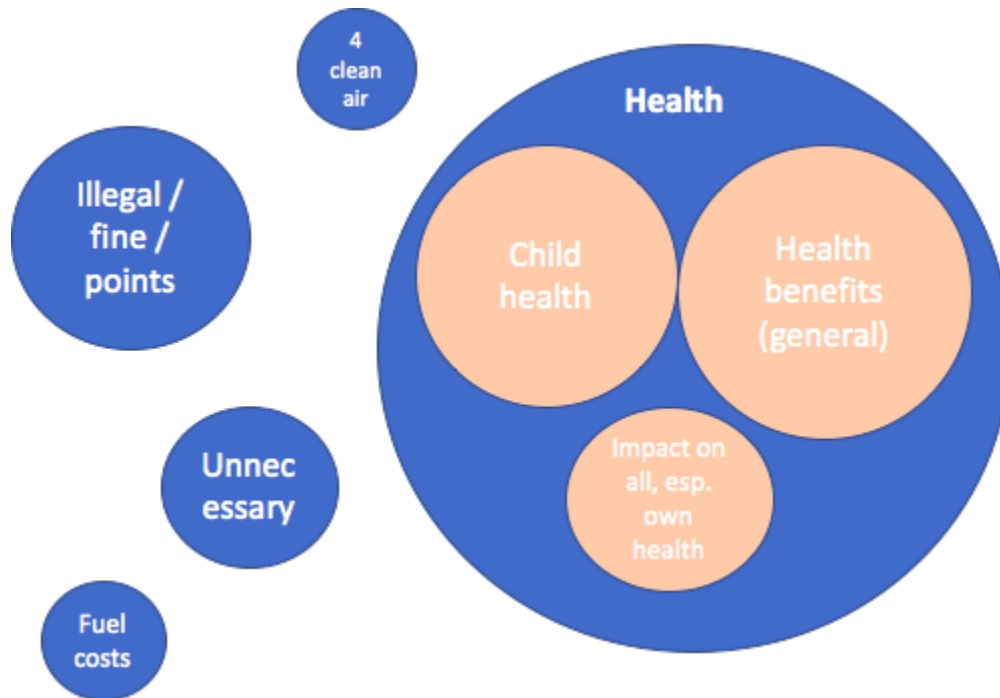


People could suggest other reasons in the 'Other' response box. Responses included:

- They were just about to leave
- Perceptions of association with crime
- Stuck in traffic due to LTNs
- Unaware of climate issues / ignorance
- Sheer absentmindedness
- Lack of concern about the impacts of idling on others
- Can't be bothered - it's not their problem
- Don't know how long the level crossing will be down for.

Q5: If you had to choose just one message to convince drivers to switch off, what would it be?

The larger the circle, the more responses that message had.



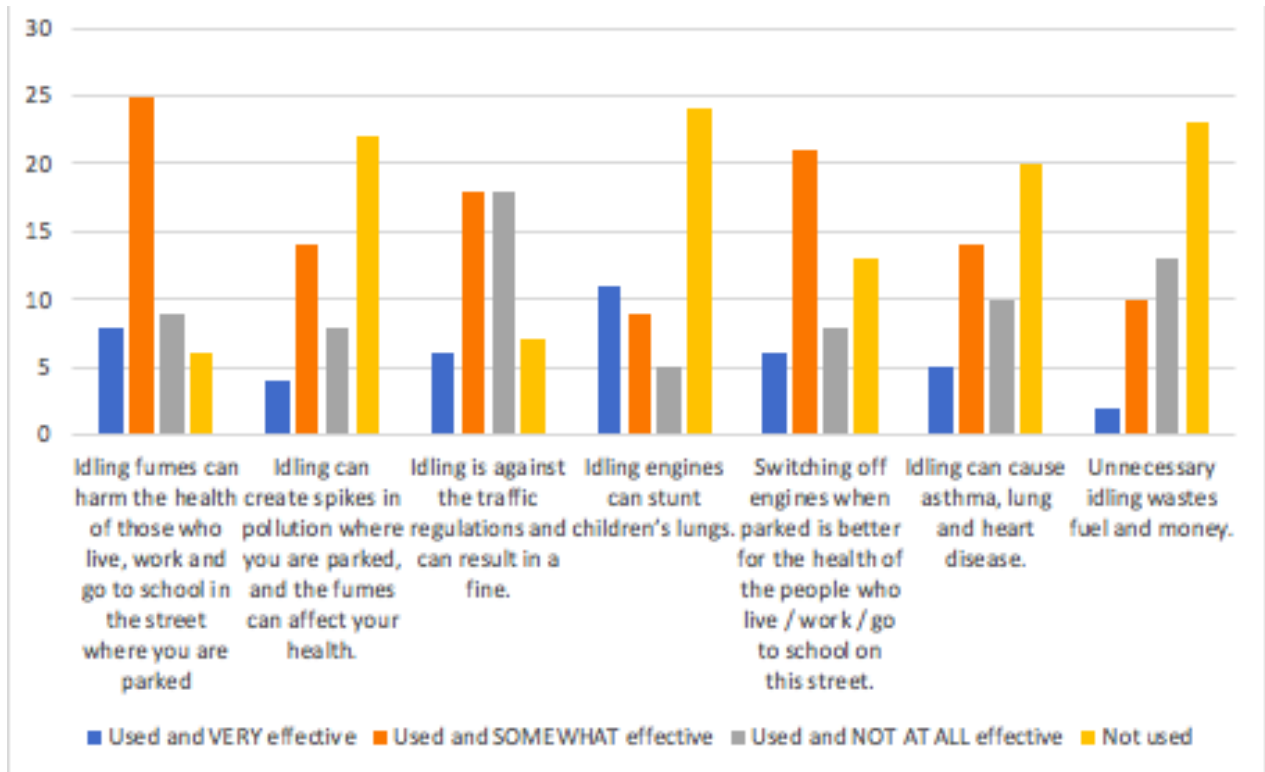
This was an open-ended question. Messages around the health impacts were the most common responses - including messages about how it can impact health in general, the health of children, and how it can impact your own health, as well as others.

However, messages about how you could be given a fine also came up frequently. Four of the 49 respondents (8%) suggested the law around idling needed to be tightened, with two of those respondents (4%) suggesting points should be given on a driver's license.

Only one respondent suggested a positive message about how switching off could help to clean the air. This was somewhat surprising given that it is one of the key messages promoted during volunteer training.

Q6: Here are some messages asking drivers to switch off their engines when parked or pulled over. Please let us know if you have used any of these messages, and if so, do you think they were effective?

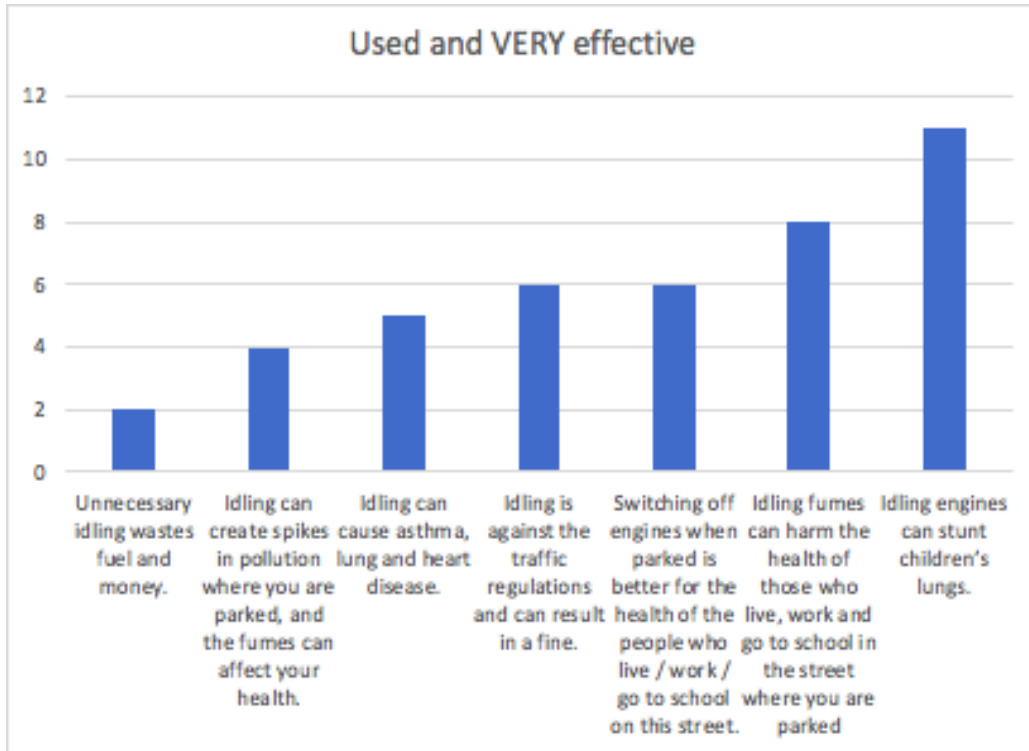
Below is a chart showing all questions, and how they were rated in terms of effectiveness.



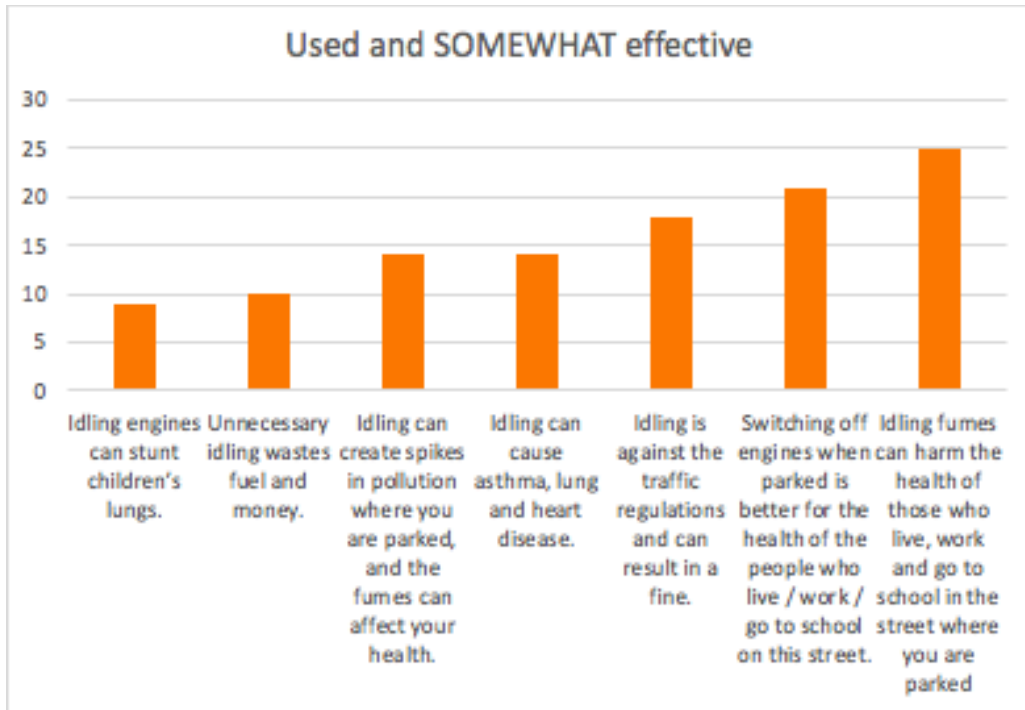
In the following charts you can see responses by rating.

Questions with the response “Used and Very Effective”

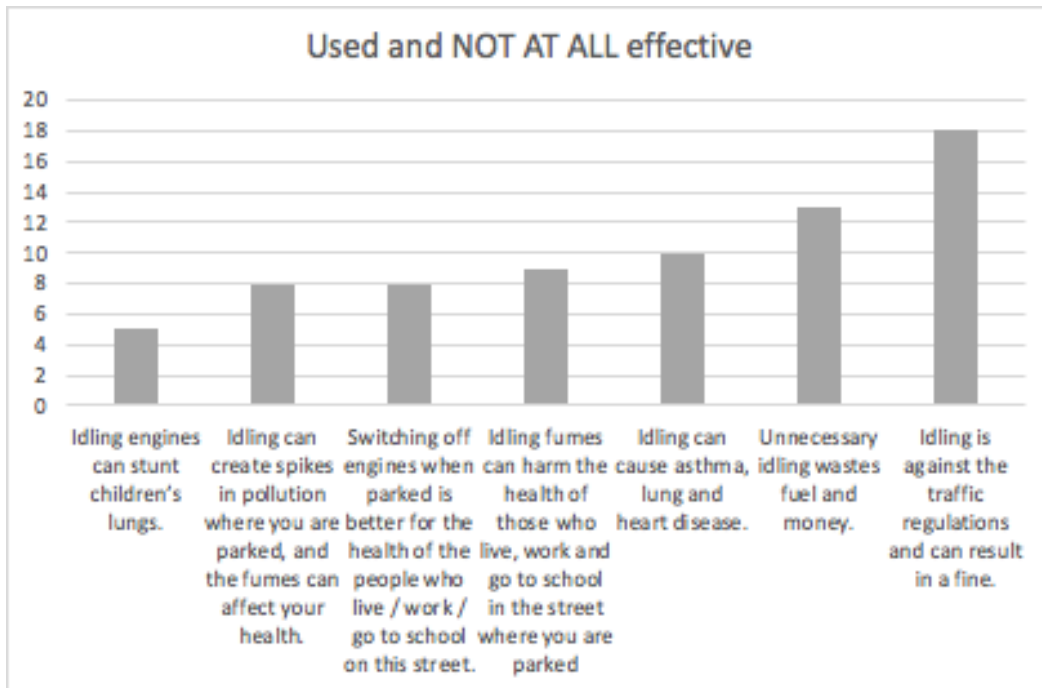
‘Idling engines can stunt lungs’ had the greatest number of respondents rating it as ‘used and very effective’.



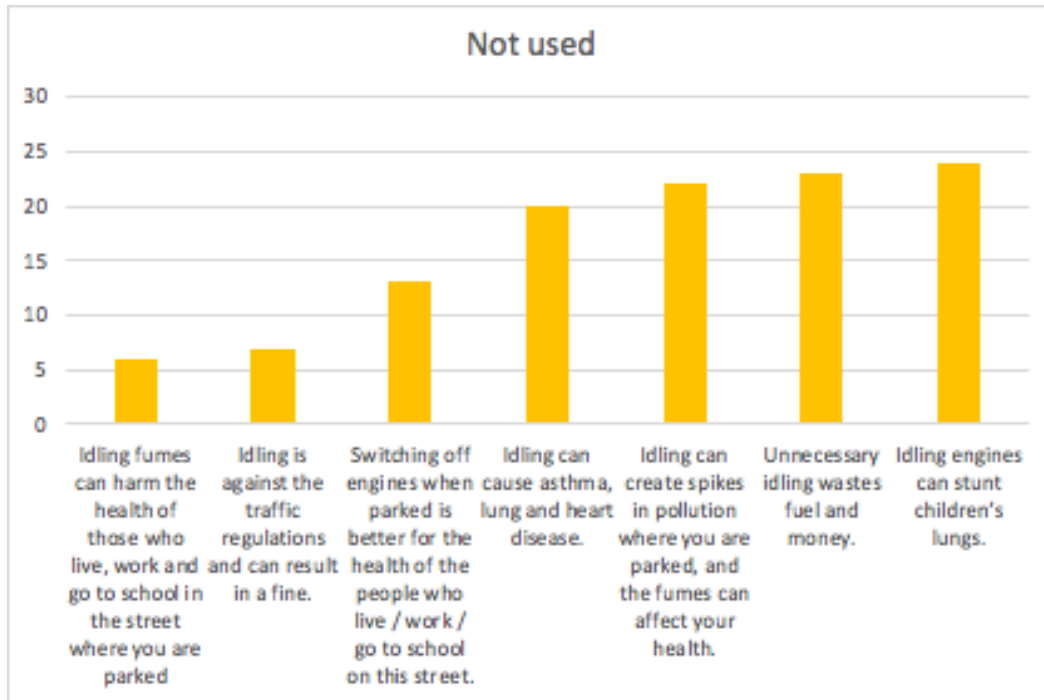
'Idling fumes can harm the health of those who live, work and go to school in the street where you are parked' had the most respondents rating it as 'used and somewhat effective'



'Idling is against the traffic regulations' had the most respondents rating it as 'used and not at all effective'.



The message with the lowest number of respondents rating it as 'not used' is that Idling can harm the health of those who live, work and go to school in the street where you are parked. This is in line with Idling Action training, which promoted that as a message that should be used.



Q7: Can you comment on why you think the messages were / weren't effective?

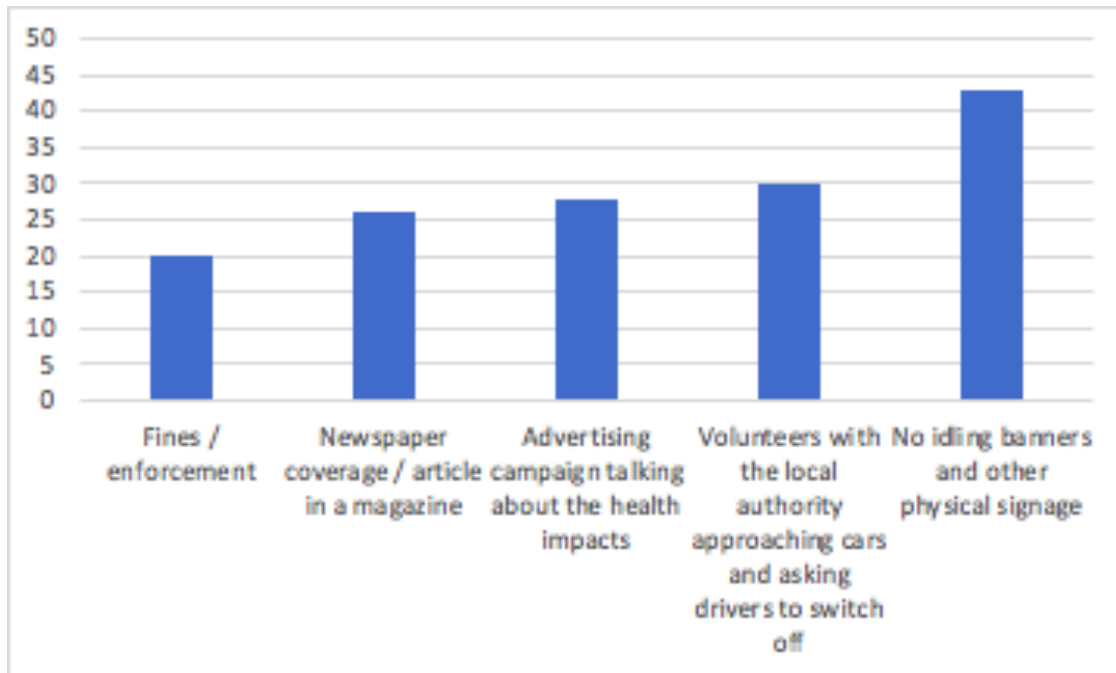
The 49 responses were analysed and themes were identified in the responses. All responses were then analysed using thematic analysis to identify which themes came up most frequently. This analysis can be seen in [Appendix C](#).

The most frequent comments made were:

- People either don't care / are selfish / don't think it makes much difference in the grand scheme of things (12 responders).
- People don't like being told what to do by civilians (8 responders).
- People don't understand the impacts / need more awareness (6 responders).
- People think they can get away with it / fines would be more effective (4 responders).
- Child health messages are especially effective outside schools (3 responders).
- Awareness needs to be raised about fines (2 responders).

Q8: Which of these (if any) do you think local authorities should use to engage drivers on the topic of idling? Please tick all that apply.

Please note, enforcement / fines was not an option as one of the checkboxes, but 20 respondents talked about enforcement / fines in the 'other' response box.

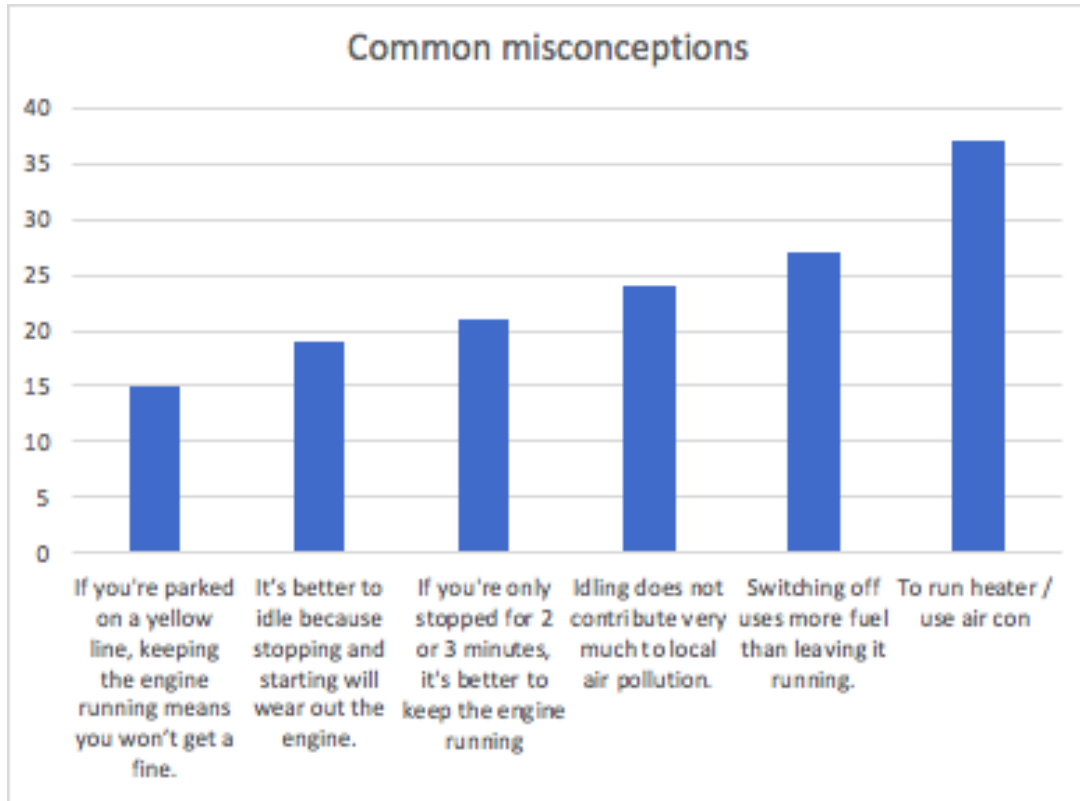


Banners and signage were the most popular response, although one respondent suggested that banners were not effective as there is one outside his / her house and drivers continue to idle.

Other suggestions of note included:

- A campaign consisting of TV ads followed by a period of focus on enforcement by local authorities could make a big impact.
- Local leaders - from the council and religious groups - should speak out about the issue.
- Some suggestions were made which are being done already by Idling Action, including:
 - Social media campaign
 - Educating children so that they pass on the message to parents.
 - School gate workshops
 - Engaging delivery and cab drivers, although the respondent suggested this should include encouraging the companies to put in place strict anti-idling policies.

Q9: Here are some common myths (misconceptions) about engine idling. Please tick all that you've heard or encountered from drivers when justifying why they are idling? You can also add any other myths you have come across in the 'other' box.



These appear to be in line with several of the responses given in the driver surveys, as to why drivers idle.

Q10: Other suggestions

The most common suggestion made by 50% of respondents was that the legislation needs to change so that fines can be given without having to provide a verbal request to switch off beforehand. Several suggested this should happen alongside a national awareness campaign (many people don't know about the fines).

Other suggestions included:

- Signs at level crossings counting down the seconds until the barrier will go back up.
- Asking people on really congested roads to post anti idling A3 or A2 sized posters in their front windows.

- Greater emphasis on the impact on the health of people inside the idling vehicle.
- Signage and flyers from children.
- There should be support from other driving organisations such as TfL, DVLA etc...
- Chip away - use leaflets and banners at schools, get backing from businesses, parents, elected members.
- Law needs to be changed.

2.3 Summary of findings from background research

2.3.1 Idling Action data review findings

Over the four phases of Idling Action, 47% of interactions were idling drivers. It is encouraging that on average, throughout the four phases of Idling Action, 80% of idling drivers switch off when asked to during events. There was a small increasing trend in the percentage of drivers switching off from 77% in Phase 1 to 85% in Phase 4, with a small decrease from Phase 2 (82%) to Phase 3 (80%).

Average idling rate for all vehicles was 47%. Car drivers had a lower rate of idling (45%) than other types of vehicles. Professional drivers had higher rates of idling - 89% for minicabs, 67% for vans, and 50% for taxis.

2.3.2 Volunteer survey findings

Volunteers think the main reasons drivers idle include that:

- They don't think they are doing anything wrong
- They are waiting to pick someone up
- They are running the heating and cooling.

Volunteers thought that the following two messages were the most effective at getting drivers to switch off, in their experience:

- Idling engines can stunt lungs
- Idling fumes can harm the health of those who live, work and go to school in the street where you are parked

When asked an open-ended question about what one message would be most effective at getting drivers to switch off, 72% of volunteers think messages to drivers should focus on the health impacts of idling.

When asked what they thought could be done to reduce idling in their area, 50% of respondents commented that there needs to be more enforcement and fines (which would require the government to make changes to current legislation). This was in an open-ended question, so could have been higher if it was a multiple choice.

Although when asked how successful they had been at encouraging drivers to switch off by explaining that idling could result in a fine, the volunteers did not rate it as effective as other messages. This is perhaps because the volunteer isn't able to give out the fine themselves..

Banners and signage were believed to be the best tactics to use to reduce idling.

2.3.3 Research questions for Phase 2 research

Using the information gained from Phase 1 of the research, the Phase 2 surveys were tailored to answer the following overarching questions devised at the outset of the project:

- Which approaches used in the Idling Action campaign are mostly likely to change behaviour long term.
- Which messages used to convince drivers to switch off in the Idling Action campaign are most likely to change behaviour long term?
- What are the most common reasons for idling?
- What are the common pushbacks?
- What are awareness levels about idling like generally in London?

3.0 Research into driver attitudes

There were 3 ways that drivers were surveyed:

1. Via the RAC's driver panel.
2. Via an online google forms survey that was promoted via Local Authorities' comms channels, GLA and social media.
3. Face-to-face with drivers in London.

Each survey differed slightly to suit the surveying method, however the key questions were asked to all participants, and therefore some comparisons can be made across the surveys.

The RAC panel results are believed to be more reliable than the other two survey methods. The face-to-face survey responders may be less truthful in some of their responses as they have been put on the spot and asked questions directly. Most responders to the online survey found out about the survey through their local authority communications, so it may be skewed towards people who have an active interest in council strategies and policies.

Therefore where results conflict, we give more weight to the RAC panel results.

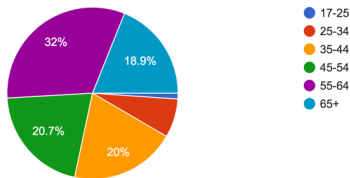
RAC Survey

- 2,165 drivers responded, of which 93 were from London.
- 55% of respondents were male, and 45% female.
- Age breakdown was not provided by region, but overall:
 - 9% were aged 17-34.
 - 12% were aged 35-44.
 - 19% were aged 45-54
 - 25% were aged 55-64
 - 35% were aged 65+
- London results were analysed, and compared to the UK results - as the London respondents were only a small % of the total respondents, it was interesting to see how they compared.
- The results for London did not significantly differ from the UK results and therefore the smaller London dataset can be considered representative of the overall survey response data.
- Please note, the UK results include the data of all regions, including London.

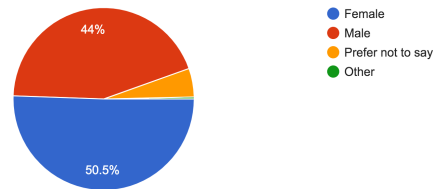
Online survey

- 289 respondents from across London.
- 50% of the responses were from two boroughs, due to these Local Authorities being successful in their efforts to promote the survey.
- Includes car drivers (96%), fleet drivers (2%), van drivers (2%).
- Good spread of age and gender, as shown below.

Your age (optional)
275 responses



Your gender (optional)
277 responses



Face to face survey

- 115 responses from across London
 - conducted across inner and outer boroughs from the north, south, east and west.
- Type of vehicles that respondents drove - 48% car, 35% van, 8% taxi, 7% larger vehicles (e.g. bus, lorry, coach), 2% motorbike.
- The type of fuel used by the vehicles driven by respondents was 59% diesel, 32% petrol, 5% hybrid, 4% electric.
- 72% of respondents were driving for work; the remainder were for school run, shopping, and visiting relatives.
- A spread of ages: 17-25 yo (4%), 25-34yo (20%), 35-44yo (28%), 45-54yo (34%), 55-64yo (12%), and 65+ (2%).
- 76% of respondents were male drivers.

3.1 Combined responses from all surveys by question

Analysis was undertaken by CWC of responses to the survey questions from across the three survey types, comparing and amalgamating the responses where possible. Colour-coded thematic analysis was used to identify common themes in open-ended question responses.

The analysis is presented below.

Q: Do you switch off your engine when parked?

Responses vary depending on the survey format. Face-to-face (F-2-F) have the lowest percentage claiming they always switch off, possibly as many of these drivers were found to be idling at the time.

The most popular responses were ‘always’ or ‘usually’.

- *Always: 21-54%* (21% F-2-F, 32% RAC, 54% Online)
- *Usually: 28-50%* (49% F-2-F, 50% RAC, 28% Online)
- *Sometimes: 10-28%* (F-2-F 28%, 17% RAC, 10% Online)
- *Rarely: 1-5%* (2% F-2-F, 1% RAC, 5% Online)
- *Never: 1-3%* (0% F-2-F, 0% RAC, 3% Online)

Q: What are the most common reasons given by drivers for idling?

Drivers were given a list of 11 common reasons for idling (with the option of providing an ‘other’ response). Drivers were asked to tick the box for why they might idle.

The top 3 most common reasons given are listed below. These are similar to the findings in the volunteer survey.

Most common reason rating		RAC	Online	F-2-F	Volunteers	LAs
1	Dropping someone off/picking up	1st	2nd	2nd	3rd	4th
2	Heating / cooling	2nd	1st	1st	2nd	2nd
3	Just habit*	-	4th	3rd	4th	1st

- Just habit was not given as a response option for the RAC survey.

Q: Which are the most effective messages for encouraging drivers to switch off when parked?

The drivers were given a selection of different messages to rate. The message rated as most effective by drivers from across all surveys was:

- Switching off engines when parked is better for the health of those who work, live and go to school on this street.
- However the different survey formats had different findings for other messages:
 - Online driver survey, it was the more hard-hitting health messages that were thought to be the most effective, but some of least popular in RAC.
 - Idling wastes fuel and money - highest score for 'effective' in RAC survey but was least popular in the online & F-2-F surveys.
- The message about how idling is illegal and could result in a fine was not rated very highly for effectiveness (least effective of all messages in online survey, 2nd least effective in F-2-F, 3rd least effective in RAC).

The popularity in the RAC survey of the message around idling wasting fuel and money was surprising. It is not a message that has previously been used in any of the Idling Action communication materials or campaigns.

Q: Which tactics would be effective at engaging you on the topic of idling?

The tactics that can be used to engage drivers on the topic of idling were rated by drivers in the survey. The results shown in the following table are ordered as rated by RAC survey. All tactics had a good number of respondents rating them as effective, but the most popular were the ad campaign, followed by the banners and signage.

	RAC	Online	F-2-F
Ad campaign about health impacts	1	1	2
Banners / signage	2	2	1
Media coverage	3	4	4
Volunteer approaching driver	4	3	2

Other suggestions made by respondents to the RAC and F-2-F surveys in the 'other' response box included:

- Giving out fines
- Targeting school gate
- Making it part of the driving test
- Company policy

Q: Would you like to comment on why the messages / tactics might be effective?

Several respondents made the point that any campaign needs to use a combination of different tactics and messaging, as there are many different reasons why people idle. Signage, awareness raising through campaigns, and enforcement were the most popular suggestions.

Here is a selection of comments:

"The more I see signage about things like this, the more I think about it. So seeing adverts or signs that say no idling or that mention health risks mean I am more likely to think about it and never idle, instead of doing it on the odd occasion."

"Awareness needs raising - some people genuinely don't think it is an issue. Need to be shown how unhealthy / illegal it is. And we need to make it socially unacceptable. Have a national health campaign showing why it is bad for health."

"I tend to turn off to save fuel and don't think so much about the health impact as it seems a drop in the ocean."

"Some people are mostly concerned with their own / own family's health, so need to make it personal - how it can affect them."

Q: Do you have engine stop / start technology in your vehicle, and if so, is the technology enabled? (If you have more than one vehicle, please think about the one you use most often)

According to our surveys, 5-10% of drivers switch the stop-start technology off. The most common reasons for drivers choosing to switch the technology off are: concerns about it not re-starting, and finding the technology annoying.

If you extrapolate to 5-10% of all London drivers, that is a significant number (there are 2.6m cars in London⁵). That would equate to 130,000 - 260,000 cars with the technology potentially switched off.

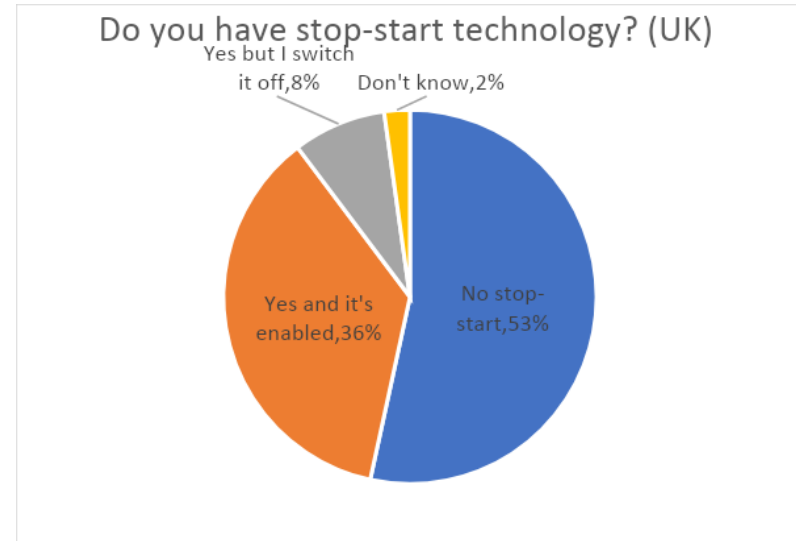
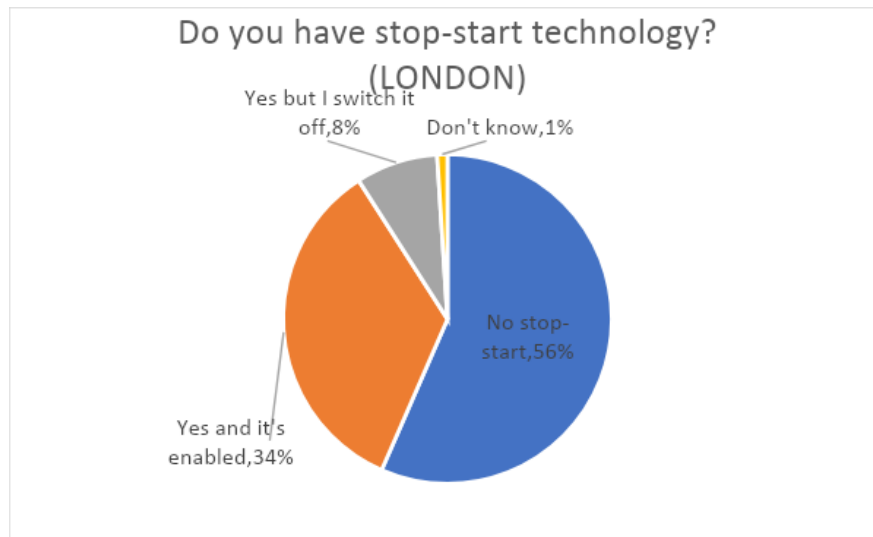
3.2 Full results by survey type

3.2.1 RAC driver survey

2,165 drivers responded to the survey, of which 93 respondents were in London. London results were analysed, and compared to the UK. As the London respondents were only a small % of the total respondents, it was interesting to see how they compare and whether London results were representative of the wider data set. Please note the UK results presented below include the data of all regions, including London.

⁵ <https://www.statista.com/topics/5192/driving-in-the-united-kingdom/>

Q1: Do you have engine stop / start technology in your vehicle, and if so, do you have the technology enabled? (If you have more than one vehicle, please think about the one you use most often) (Please select ONE answer)

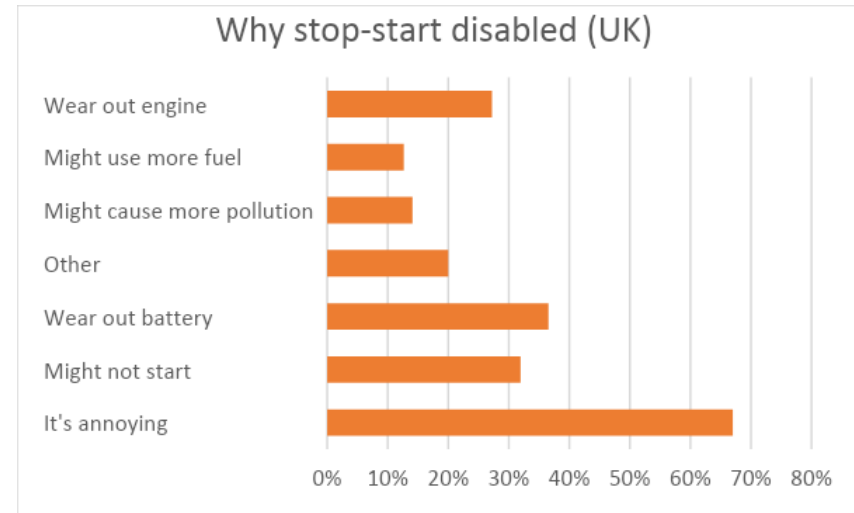
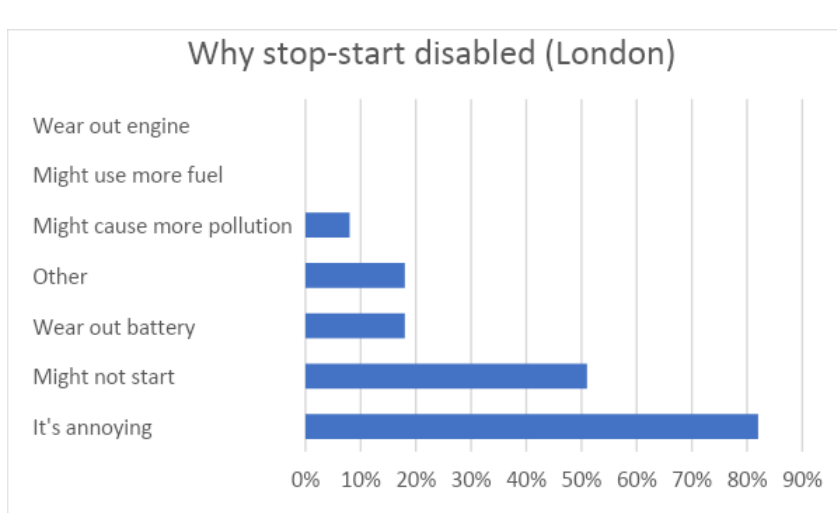


London findings:

- Majority don't have stop-start
- Out of those who do, most have it enabled.
- Only 8% switch it off. However if you extrapolate to all London drivers, that is a significant number (2.7m cars in London⁶).

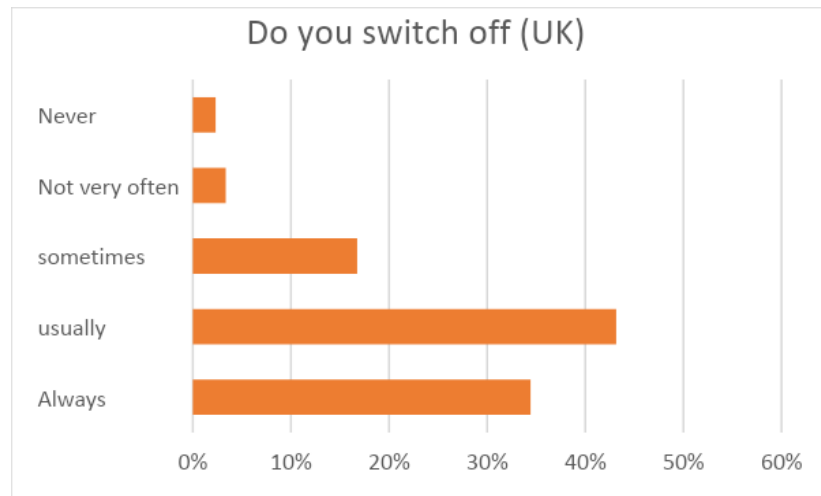
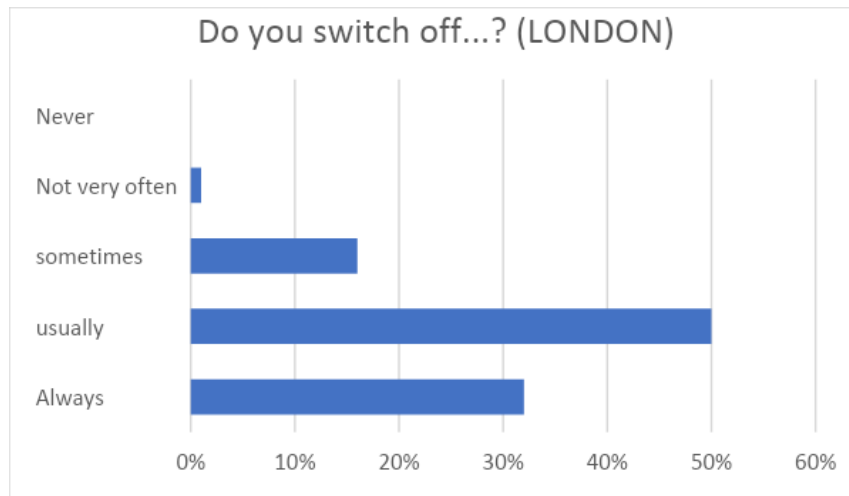
⁶ <https://www.statista.com/topics/5192/driving-in-the-united-kingdom/>

Q2: Why do you keep the stop-start technology switched-off, in the vehicle you use most often? (Please select all that apply)



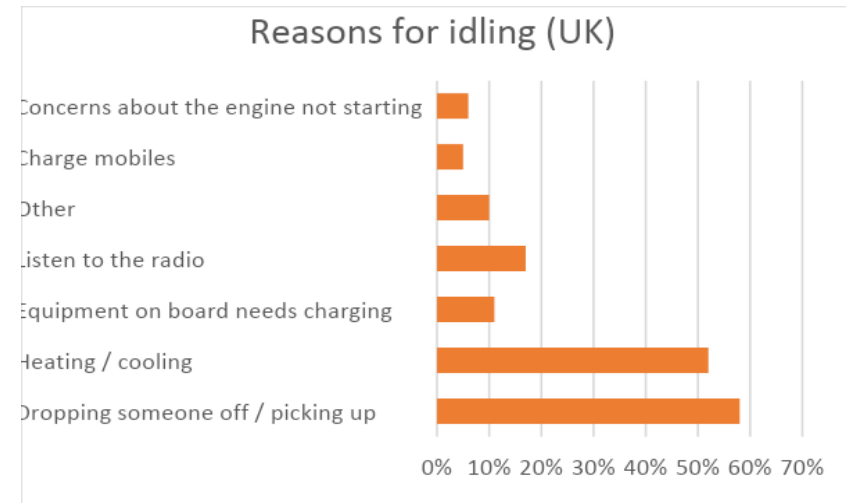
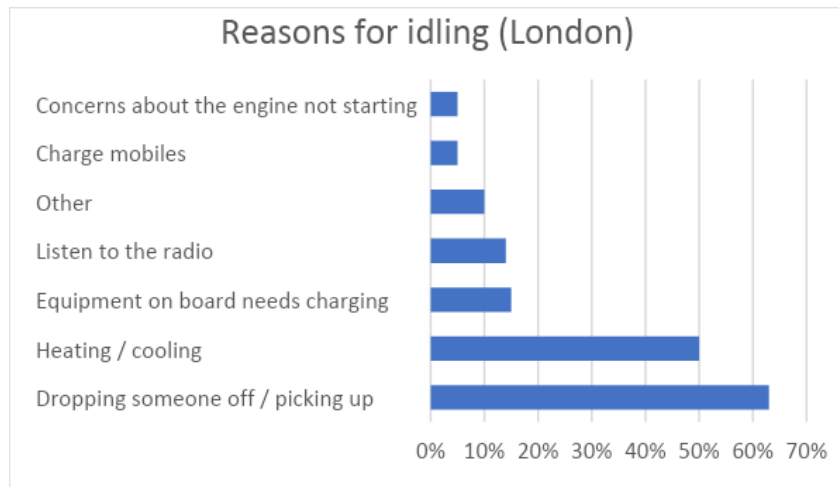
- Concerns about it not re-starting and finding the technology annoying are the biggest reasons for drivers choosing to switch the technology off.
- Note the sample size for London is small for this question (only 10) as only a small % have the technology.

Q3: Do you switch off your engine when you've parked or pulled over, but remain in your vehicle? (Please select ONE answer)



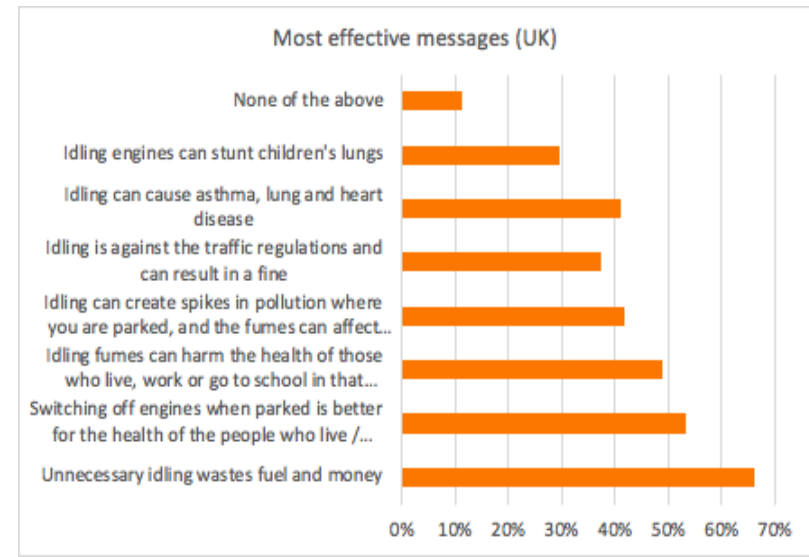
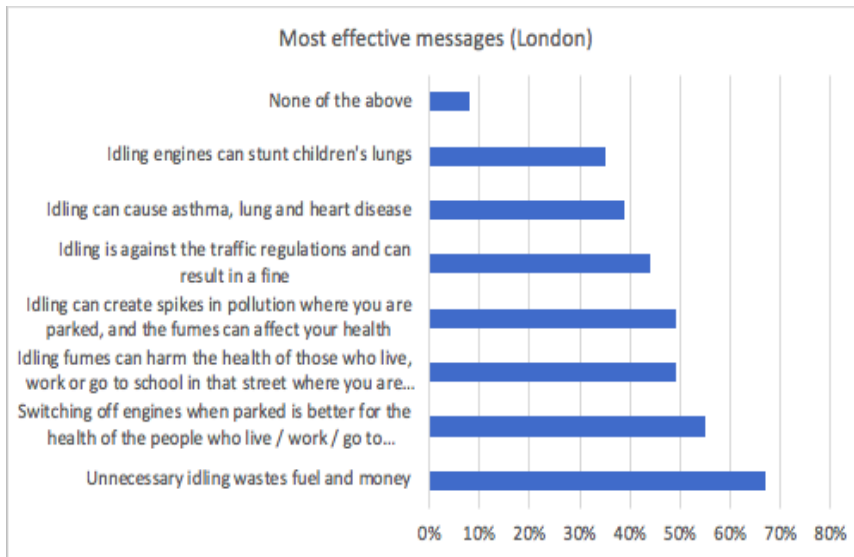
- Only 32% of drivers report they always switch off in London.
- 50% responded 'usually', indicating they do idle occasionally.
- 17% of drivers switch off 'not very often', or 'sometimes'.

Q4: Why do you sometimes leave the engine on when you've parked or pulled over, but remain in your vehicle? (Please select all that apply)



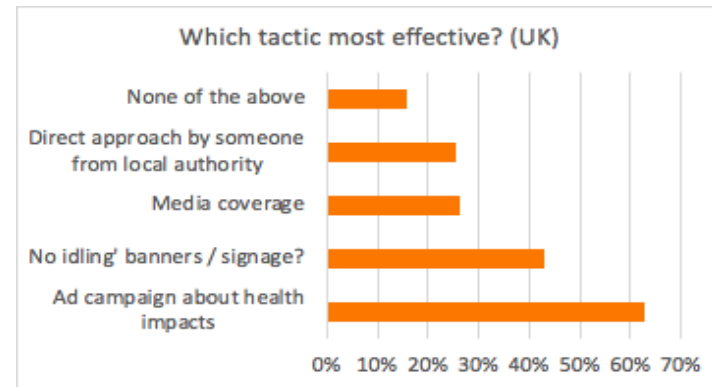
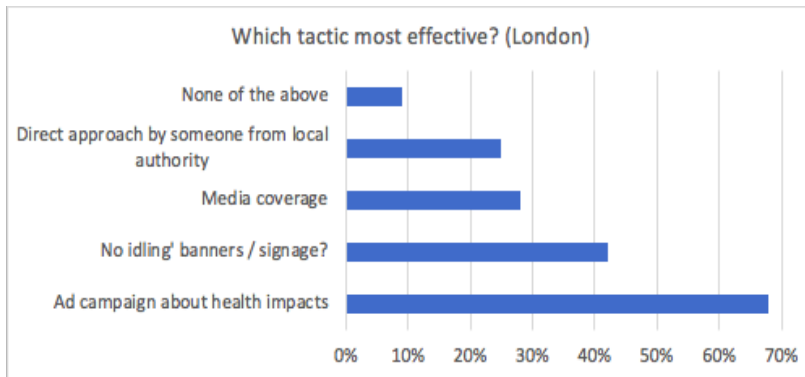
- 2 reasons are very common amongst responders (at least 50% ticking these options):
 - Dropping someone off / picking up (63%) and
 - Heating / Cooling (50%) in London.
- These are also the two most common reasons for the UK.

Q5: Here are some statements that have been used by some local authorities in the past to encourage drivers to switch off their engines when parked. Which, if any, do you think would encourage drivers to switch off their engine when they are parked or pulled over, but remain in their vehicle? (Please select all that apply)



- Somewhat surprisingly, the most popular statement in London and the UK was that ‘Unnecessary idling wastes fuel and money’.
- And the least popular was ‘Idling engines can stunt children’s lungs’.
- Another popular choice was ‘Switching off engines when parked is better for the health of the people who live, work and go to school on this street’.
- There is not a huge variation between the % of people who ticked each option.

Q6: Which of these, if any, do you think would be successful in making drivers think about the topic of engine idling? (Please select all that apply)



- Ad campaign about health impacts is believed to be the most effective tactic at engaging drivers on the topic of idling (68% of London respondents and 63% of UK respondents).
- Banners and signage are also deemed potentially effective (42% of London respondents and 43% UK respondents).

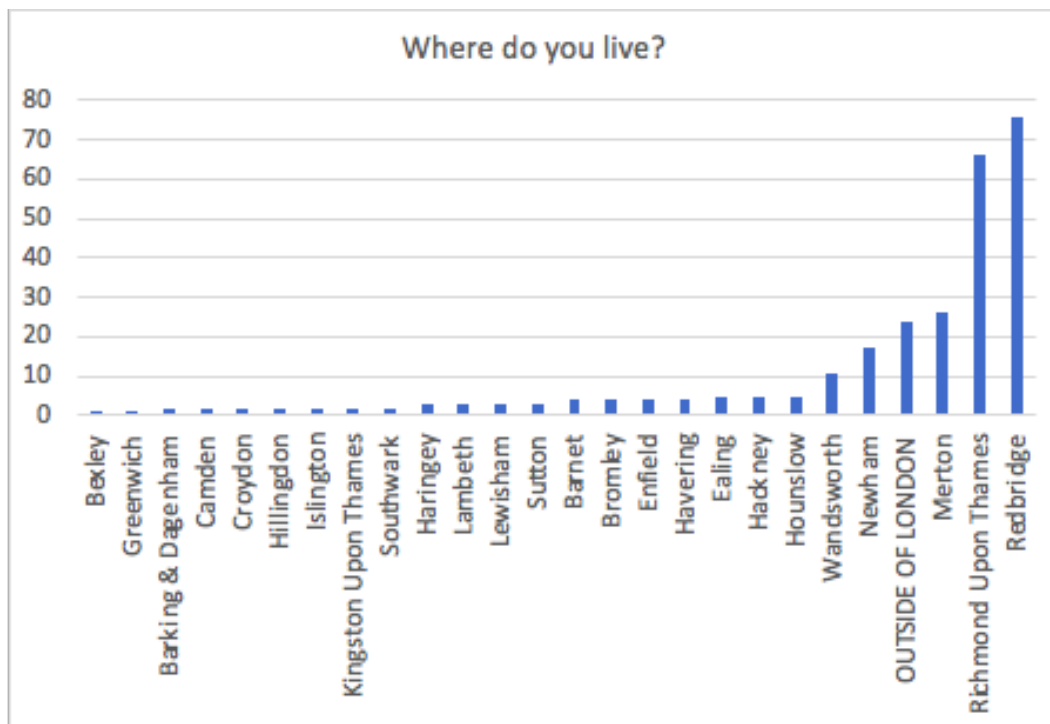
3.2.2 Online driver survey

A google form online survey for drivers was promoted via:

- Local authority newsletters, tweets and websites
- GLA newsletter and tweets
- Fleet driver companies
- Facebook groups - such as resident and parent groups.

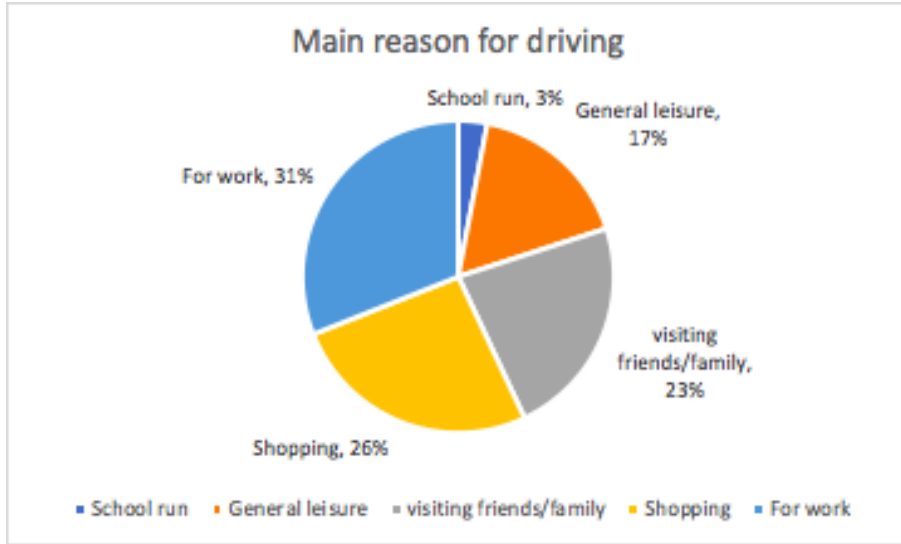
289 drivers responded to the survey.

The drivers were from 25 different London boroughs. 50% of responses were from two outer London boroughs, due to the successful promotion of the survey by those boroughs. There was a good spread of ages and gender. 8.5% of respondents live outside of London.



The following charts display who responded, what type of vehicle they drive and why they drive.

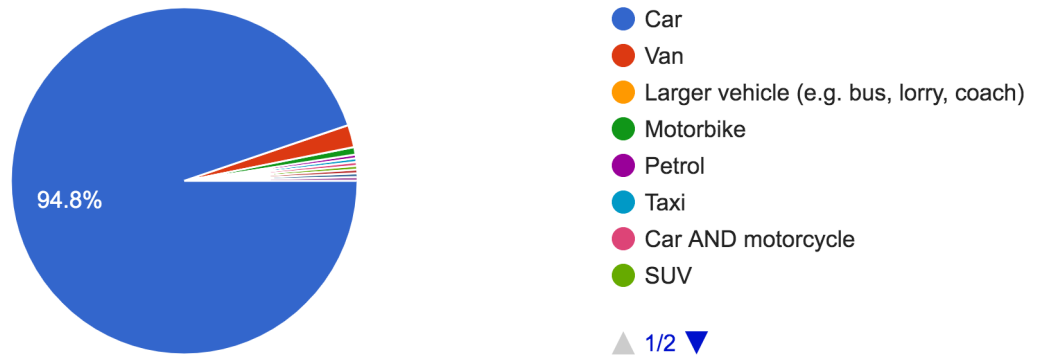
The most popular reasons for driving were for work (31%), shopping (26%), visiting friends / family (23%) and general leisure (17%). Only 3% responded to say the school run was their main reason for driving.



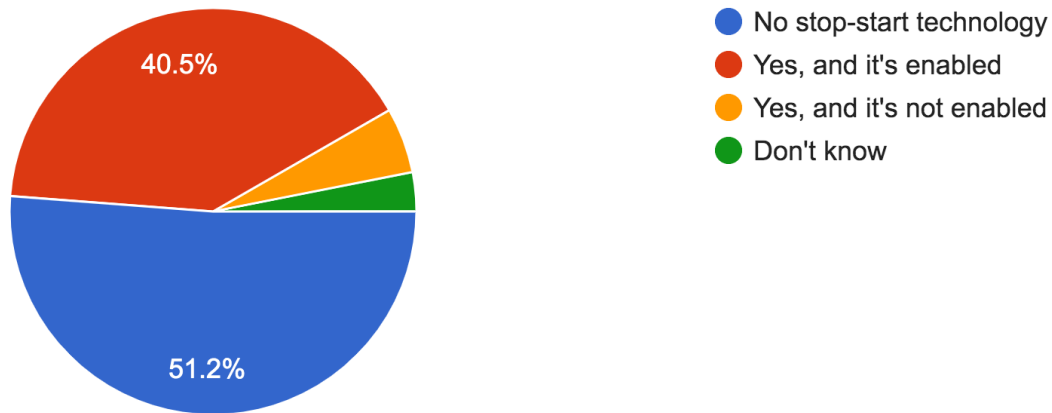
The majority of the respondents were car drivers.

What type of vehicle do you drive?

288 responses



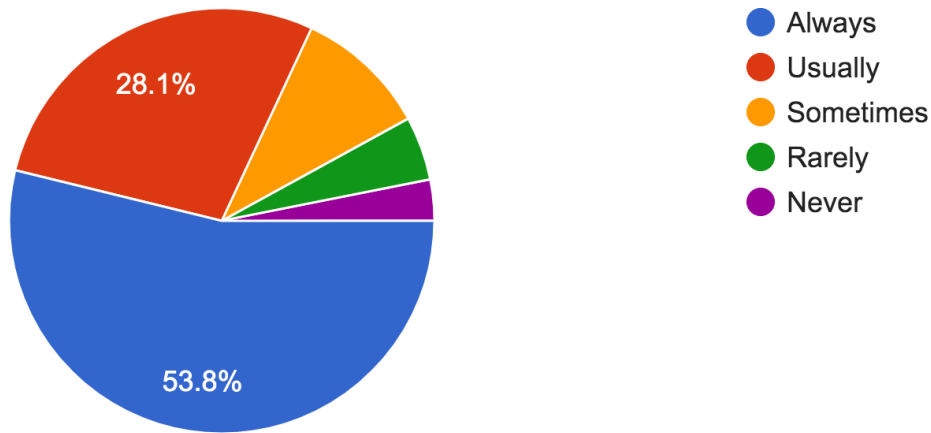
Q: Do you have engine stop / start technology in your vehicle, and if so, is the technology enabled?



Of those who have the engine stop start technology, but it's not enabled (5% of the respondents), these are some of the reasons given as to why:

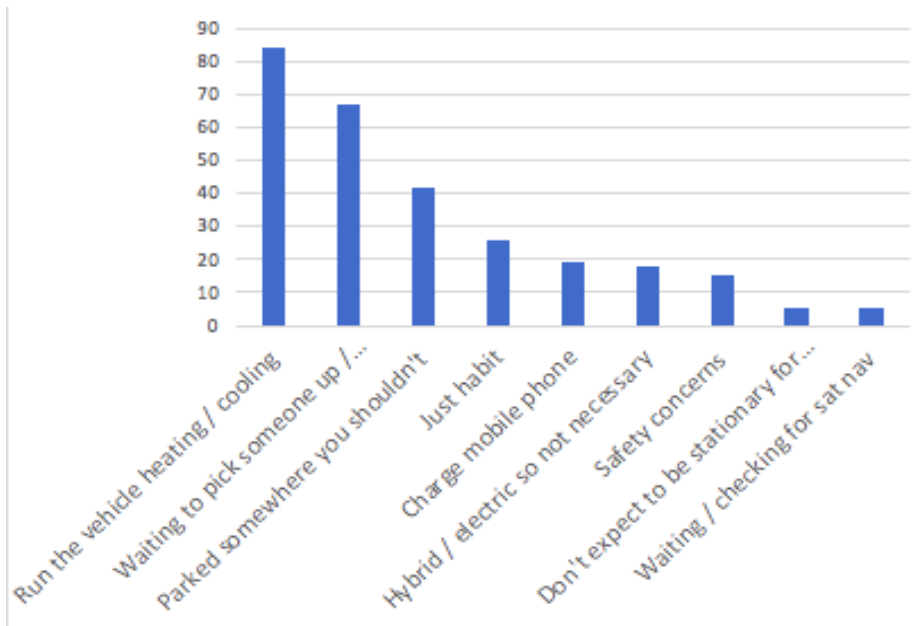
- It's annoying
- It might wear out the engine.
- It stops the air con working.
- It's unreliable in stop-start traffic.
- It's dangerous - causes a delay when pulling away, especially after roundabouts.
- I don't know how to enable it again.

Q: Do you switch off your engine when you've parked your car or pulled over for a minute or more, but remain in the vehicle?



- 54% of drivers always switch off when parked.
- 28% usually switch off.
- 10% sometimes switch off
- 4% rarely switch off
- 3% never switch off.

Q: Reasons why you might (sometimes) leave the engine on while parked for a minute or longer. Tick all that apply:



Respondents could tick all the reasons that apply to them, and could also provide other reasons in the 'other' box.

'Other' reasons given included:

- Stuck in congestion, perceived due to LTNs.
- Battery / engine concerns
- Believing it's more efficient to leave on, than to switch off and on again.
- Listening to the radio.
- Just forget.
- "When the phone is in cradle charging, to stop the engine the phone should be removed from the cradle first to avoid a charge surge on the phone when re-starting to avoid damage to the phone, to do this could be an offense as requires handling the phone whilst driving (ie with engine running before turning it off).

Q: Here are some statements which have been used by the Idling Action campaign, asking drivers to switch off their engines when parked. Please let us know how effective you think the following would be in convincing you to switch your engine off when parked.

Drivers were asked to rate each message by how effective they believe it to be. All of the comments were rated very highly for 'very effective', 'effective'.

The top 3 messages with the highest number of 'very effective' responses were:

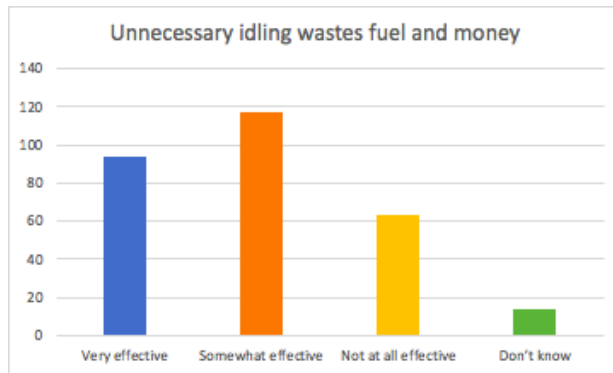
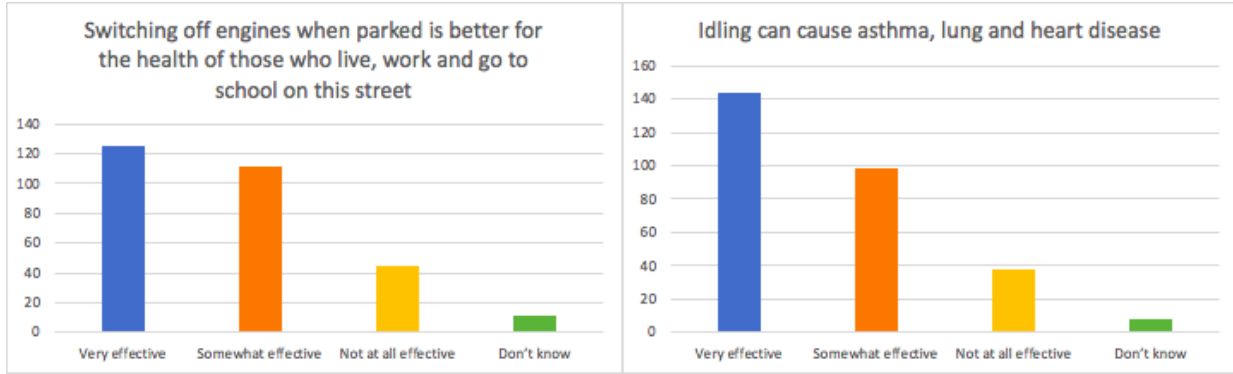
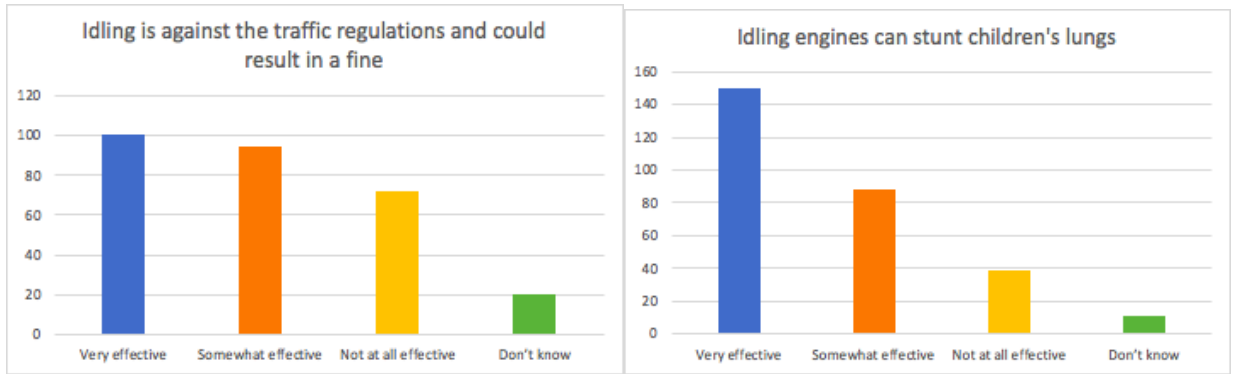
- *Idling engines can stunt children's lungs*
- *Idling fumes can harm the health of those who live, work and go to school on this street.*
- *Idling can cause asthma, lung and heart disease.*

From these responses, it would appear that the more hard-hitting health messages are likely to be most effective.

The message with the highest number of responses for 'not very effective' was that *idling is against the traffic regulations and could result in a fine*. However it should be noted that 101 respondents believed it would be very effective (and only 72 thought it would not be effective), so perhaps more difference of opinion here from the respondents.

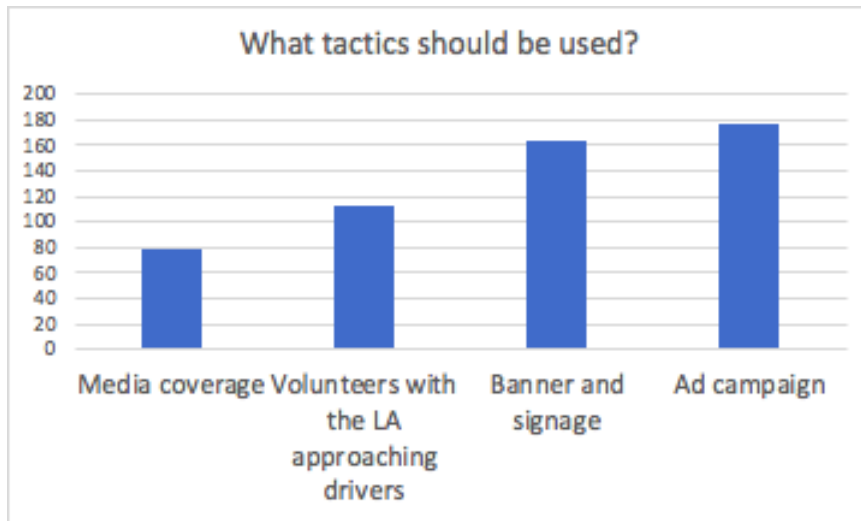
Opinion was also split on the message that *unnecessary idling wastes fuel and money*. 95 respondents thought it was very effective, 117 thought it was somewhat effective, and 63 thought it was not at all effective.

The results for each message are shown below.



Q: Which of these (if any) have been / would be successful at engaging you on the topic of idling?

Ad campaign, and banners / signage were the most popular tactics. Over 33% of respondents also thought volunteers approaching drivers should be used as a tactic.



Respondents could also make suggestions in the 'Other' response box. Similar suggestions by multiple respondents included:

- Fines (10 respondents suggested fines).
- Focusing on the school gate, with children as volunteers and also messages going on school apps / in school book bags to reach parents (4 suggestions).

'Other' suggestions by individuals:

- No idling policy at my work was successful.
- Should be part of the driving test
- Realtime pollution indicator
- Painted words on the actual street

Further to the point made above about it becoming part of the driving test, fleet drivers often have to do annual driving checks so that could be another opportunity to reinforce the no idling message.

Q: Would you like to comment on why you think certain messages / tactics might be successful

This was an open-ended question. Some of the responses are grouped into categories below.

Signs / fines

Some think nudging is more effective than enforcement. Some drivers just don't think and need reminding. Physical signs are a good reminder.

"The more I see signage about things like this, the more I think about it. So seeing adverts or signs that say no idling or that mention health risks mean I am more likely to think about it and never idle, instead of doing it on the odd occasion."

Some say they would prefer this to someone approaching them directly.



Above: No idling sign on a road leading up to a level crossing in Richmond

Others say fines are necessary because some people know they are not meant to do it but don't care, because they think they can get away with it. Some suggested prominent signage with warning of a fine.

Awareness campaigns

One respondent commented: *Awareness needs raising - some people genuinely don't think it is an issue. People need to be shown how unhealthy / illegal it is. And we need to make it socially unacceptable. We should have a national health campaign showing why it is bad for health.*

However another respondent said that they turn off rather than idle to save fuel, and they wouldn't have thought of health benefits, because they think it's a drop in the ocean.

People take messages from school more seriously.

Some people are mostly concerned with their own / own family's health, so need to make it personal - how it can affect them.

Volunteers

"A volunteer approaching a driver is effective because it is direct engagement, and it is difficult for the driver to ignore". And one said that volunteers are free, whereas signs are expensive.

One respondent was not convinced idling is the best word. Running your engine better.

"I don't take 'crusaders' very seriously".

One person commented that it must be a combination of all – a single action will not be enough: *"Only through a 360-degree approach can a difference be made and further physical posters at places like railway crossings must be put in place".* This was also suggested by other respondents.

Q: Do you have any thoughts you would like to share with us, regarding idling and how best to reduce idling levels in your area?

There were over 100 comments in response to this open-ended question. Some of the most common were:

- Awareness / publicity campaigns. Maybe copy the click-clunk seat-belt campaign.
- Some people commented on the need to improve traffic flow / smart traffic lights, with several commenting on how they perceived Low Traffic Neighbourhoods have increased congestion and idling in their area⁷.
- Need separated cycle lanes away from traffic to encourage more people out of cars.
- Signs that tell you how long barriers at level crossings will be down for.
- More enforcement.
- Publicity messages in different languages.

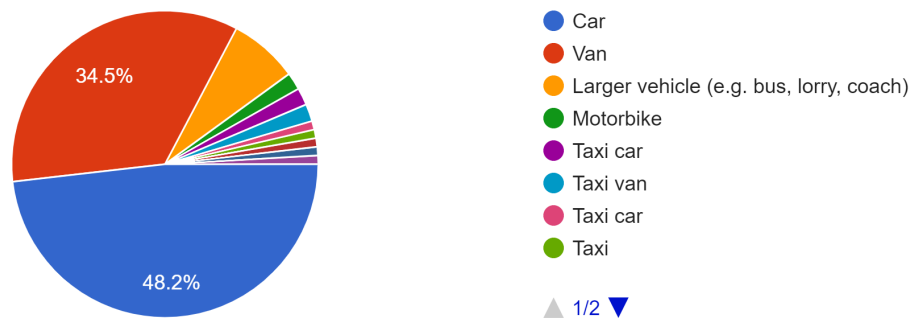
⁷ Idling in traffic is not the focus of the Idling Action campaign and is outside of the scope of this project, which aims to research tactics and messaging for encouraging drivers who are idling while pulled over or parked to switch off their engine.

3.2.3 Face to face surveys

CWC Environmental undertook Face-to-Face surveys with the general public between July and October 2021. There were 115 responses, of which 62% were from idling drivers. It was not possible to conduct surveys in all boroughs in the Idling Action campaign, due to time constraints. The surveys were therefore conducted across a selection of inner and outer boroughs, covering north, south, east and west London.

What type of vehicle do you drive?

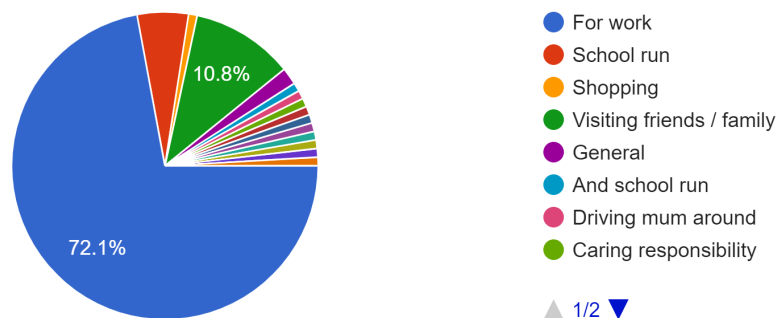
110 responses



The breakdown of the type of vehicles that respondents drove was - 48% car, 35% van, 8% taxi, 7% larger vehicles (e.g. bus, lorry, coach), and 2% motorbike. The split of fuel type used by the vehicles driven by respondents was 59% diesel, 32% petrol, 5% hybrid, 4% electric.

What are your main reasons for driving?

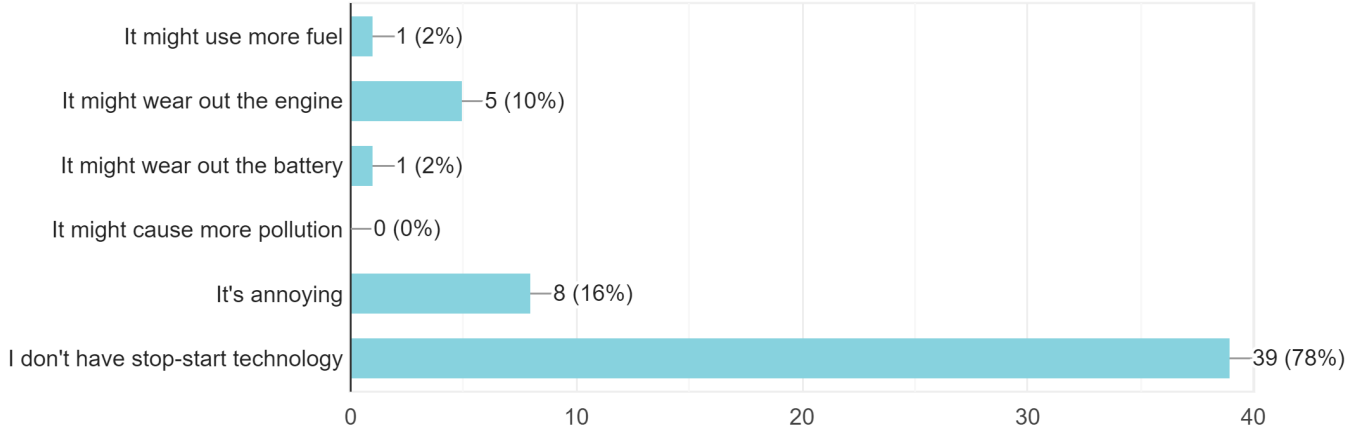
111 responses



The three top reasons noted by respondents as to why they drive were:- for work (72%), 11% said for visiting family/friends, with 5.5% saying it was the school run. There was a spread of age groups with 17-25 yo (4%), 25-34yo (20%), 35-44yo (28%), 45-54yo (34%), 55-64yo (12%), and 65+ (2%). The gender breakdown was 77% male and 23% female, 1 respondent preferred not to say, and no respondents identified as other than male or female.

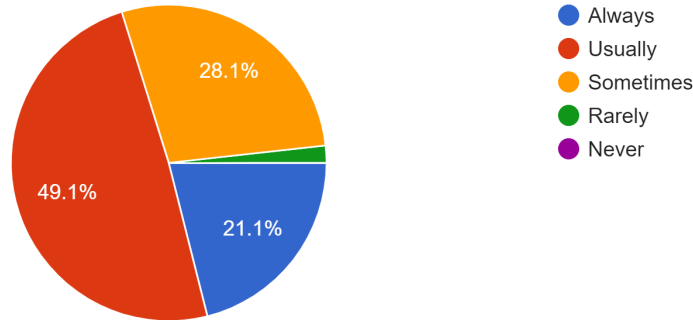
Of the vehicles driven by respondents, 22.5% had stop-start engine technology with 10.4% of the total responses (12 responses) saying they have disabled the technology. As shown in the chart below, the four reasons noted for disabling the stop-start engine technology, in order of most to least responses, was that: it is annoying, it might wear out the engine, it might wear out the battery, and it might use more fuel.

If you have stop-start technology, and it is not enabled, is that because (tick all that apply):
50 responses



Do you switch off your engine when you've parked your car or pulled over for a minute or more, but remain in the vehicle?

114 responses



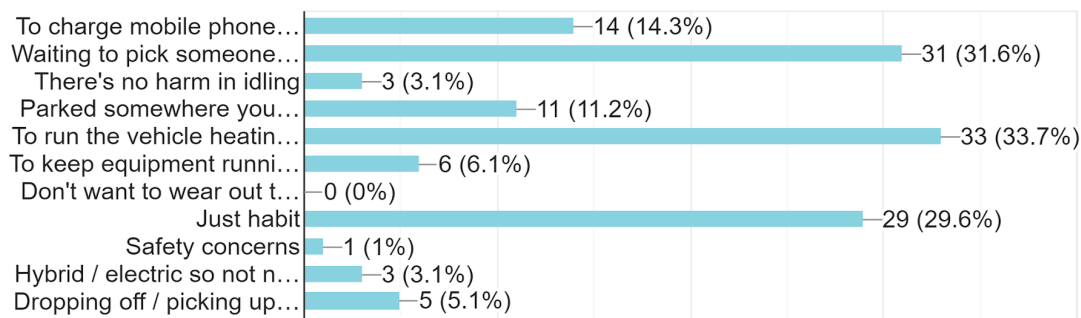
When questioned about how often they switched off their engine when parked or pulled over for a minute or more, 21% of respondents said they always do, 49% said usually, 28% said sometimes and 2% said rarely, and none said they never switch off.

The top three reasons noted by respondents as to why they might leave their engine on while parked:

- 34% - To run the vehicle heating / cooling
- 32% - Waiting to pick someone up
- 30% - Just habit

Reasons why you might (sometimes) leave the engine on while parked for a minute or longer. Tick all that apply:

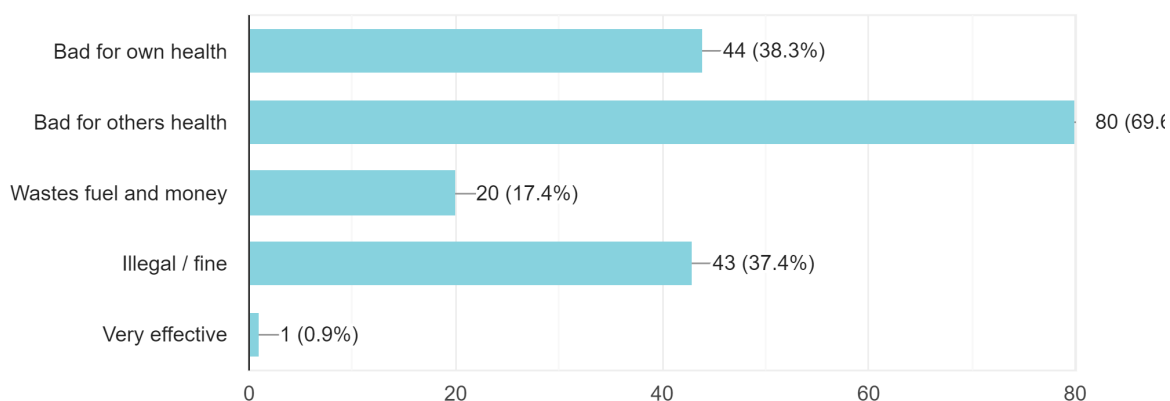
98 responses



When asked which types of messages, currently being used by local authorities, would be effective in convincing them to switch off their idling engine when parked, 70% of respondents said messages about being bad for others health, 38% said being bad for their own health, 37% being illegal or you could be fined, and 17% said it wasted fuel and money.

Here are some statements which have been used by some local authorities, asking drivers to switch off their engines when parked. Please let us know which is most convincing you to switch your engine off when parked.

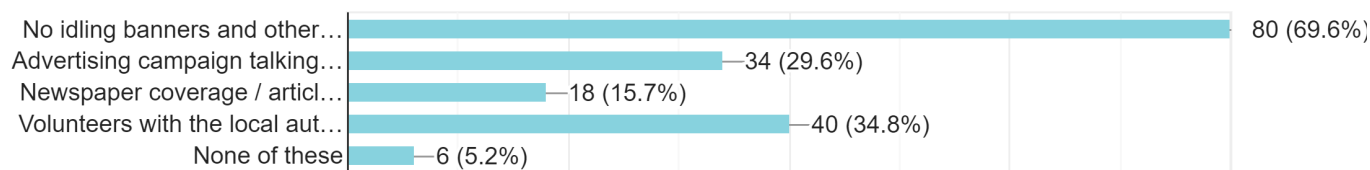
115 responses



Which tactics are the most effective? Respondents said that no idling banners and other signs were the most effective, with 70% noting it, 35% said volunteers from the local authority talking to them about idling, 30% said an advertising campaign which talked about the health effects, and 16% said newspaper coverage or magazine articles. None of these was noted by 5% of respondents.

Which of these (if any) have been / would be successful at engaging you on the topic of idling?

115 responses



There were some other suggestions made by respondents. Fines were suggested 11 times and 4 respondents suggested company policy would be effective.

Other comments by respondent included⁸:

- Need the price of electric vehicles to reduce
- Help taxi drivers move to electric vehicles
- Perceptions of Covid-road closures (inc Low Traffic Neighbourhoods), School Streets and road works causing queueing and therefore idling.

⁸Purchasing of electric vehicles and changes to road layouts/access are not the focus of the Idling Action campaign and are outside of the scope of this research project, which aims to research tactics and messaging for tackling vehicles that are idling while pulled over or parked.

4.0 Conclusion and recommendations

4.1 Conclusion

According to drivers, there isn't one single reason why people idle; there are many. And different messages and tactics are considered effective by different people. Therefore a range of different messages and tactics should be used, focusing on those that scored highest in the surveys (prioritising RAC findings).

Messages:

- A message about fuel and money was considered the most effective of all messages by the RAC panel. It was much less popular in other surveys though.
- Health-based messages are considered most effective by online and F-2-F surveys, and also by volunteers.
- The threat of fines was considered less effective by drivers, but it was a very popular idea with some of the volunteers.

Tactics

- An advertising campaign, then banners and signage, were considered the most effective tactics at engaging drivers on the topic of idling. From analysing the findings it is clear that any campaign needs to use a combination of different tactics and messaging, as there are many different reasons why people idle.
- All boroughs are taking action on enforcement of the idling regulations. The main ways the regulations are enforced are through FPN and PCN.
- Around half of the volunteers suggested (unprompted) that more emphasis on enforcement and fines would be an effective way to reduce idling. It is noted that this would likely require a change in the law.

Stop-start engine technology:

- 5-10% of surveyed drivers have stop-start technology, but have disabled it. Stop-start technology, when enabled, reduces vehicle idling emissions by switching off when stationary. The most popular reasons for disabling it are that they find it annoying or they are concerned it might wear out the battery.

Schools:

- Many volunteers and online driver respondents suggest targeting schools, both with school campaigns and messaging going home to parents, as well as targeting school gate idling with direct approaches.

Myths:

There are still some idling myths / misconceptions that are believed by some drivers. For example, leaving the engine on to run the heating and cooling was one of the most common reasons for idling, but most vehicles can do this without the engine being on for a significant length of time (up to 30 mins).

Many also believe that switching off and on again will wear out the engine. Stop-start impact on engines could be investigated, and if found to be a myth, this could be included in the campaign material.



Car free day celebrations on a school street in Tower Hamlets (above left), with no traffic at school pick up time. This was in stark contrast to a school a few roads away (above right) with parked cars, queueing traffic and an idling ice cream van metres away from school gate.

4.2 Recommendations

1 Expand the messages used currently in the Idling Action campaign to also include:

- Messages about how idling can waste fuel and money; and
- Harder-hitting health messages.

This is in addition to messages which are used currently, which are:

- Idling fumes can harm the health of those who live, work or go to school on this street;
- Idling can create spikes in pollution where you are parked, and the fumes can affect your own health.
- Idling engines can stunt children's lungs.
- Switching off engines when parked is better for the health of the people who live / work / go to school on this street.
- Idling is against the traffic regulations and can result in a fine.
- Idling can cause asthma, lung and heart disease.

2 A range of tactics and messaging should be used when running an anti-idling campaign, as different drivers noted different reasons for why a certain tactic would be more effective for them. They should be prioritised as follows:

5. Advertising campaign
6. Banners and signage
7. Media coverage
8. Volunteers approaching drivers

3 Advertising campaigns and media coverage could focus on tackling the three most common reasons why drivers idle:

- Waiting to pick someone up.
- Running the heating and cooling.
- Just habit / they don't think they are doing anything wrong.

4 Use campaign materials, and the tactics listed above, to bust some common misconceptions which were identified in the research. These include the need to leave the engine on when parked to run the heating and cooling, and that switching off and on again will wear out the engine. We would recommend working with organisations that are trusted by drivers, such as the RAC, fleet driver organisations and driving magazines, to bust these myths and to get the message about more widely.

5 Undertake more research into stop-start technology in collaboration with trusted driving organisations, such as RAC. Research is needed into the:

- Impact of stop-start technology on the engine (drivers believe it will wear it out if enabled); and
- Quantification of the environmental benefits of leaving the technology enabled (in terms of air pollution and CO₂ emissions).

There is only a small amount of research published on the topic (Zhicheng Ma et al. 2021) and some is potentially out of date (Gonzalez et al. 2011)⁹. If the research finds that the negative impact on the engine is a myth, then this should be targeted in an awareness-raising campaign. This research could be done in collaboration with trusted driving organisations, such as RAC, AA, and Autocar, whilst also looking into research on the impact of stop-start on the battery / engine.

There are 2.6m cars in London¹⁰, so this research could be used to raise awareness and encourage more drivers to leave the technology enabled, thereby reducing idling emissions. If drivers understand the benefits, they may be more inclined to leave it enabled.

6 Engage with fleet driver organisations, as Idling Action has done, as van drivers make up a significant % of idling drivers, and ask them to create a no-idling policy, and embed it into annual driver checks.

7 Those involved in running anti-idling campaigns should share their approaches and resources with other boroughs, as Idling Action has done on their website

⁹ Zhicheng Ma et al. 2021. Research on the effects of idling start-stop function on light vehicles fuel consumption and emission under different cycle conditions. Available at: https://www.e3s-conferences.org/articles/e3sconf/pdf/2021/44/e3sconf_vesep2020_01030.pdf

Gonzalez et al. 2011. Influence of the stop/start system on CO₂ emissions of a diesel vehicle in urban traffic. Available at: https://www.researchgate.net/publication/251670270_Influence_of_the_stopstart_system_on_CO_2_emissions_of_a_diesel_vehicle_in_urban_traffic

¹⁰ <https://www.statista.com/topics/5192/driving-in-the-united-kingdom/>