

# SME Green Freight

**Qualitative research**

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# 1 Executive summary

**The Department for Transport (DfT) has identified barriers for Small and Medium size Enterprise (SME) road freight operators as being a significant issue in terms of their ability to reduce emissions.** Little research has been conducted among this audience therefore Ipsos MORI were commissioned to undertake a study to fill this evidence gap. The key aims of the research were to investigate the barriers to the uptake of emission reduction technologies, behaviours and practices among SMEs road freight operators using HGVs, identify effective ways to communicate with and engage them and make recommendations on how to improve the level of engagement on this agenda, and understand what more support the government could provide to those seeking to engage.

A literature review was conducted before the qualitative research to identify the associated payback periods of voluntary actions and what works in terms of communicating with/incentivising/securing engagement from SME road freight operators. The qualitative research involved a mix of face to face and telephone interviews. **A total of 40 x 30-minute depth interviews were conducted with business owners and transport managers.**

## **Barriers preventing SME road freight operators from adopting emission reduction technologies, practices and behaviours**

The research identified key themes impacting SMEs ability or willingness to engage with the emissions reduction agenda and changes to how they operate.

**SMEs are operating on small margins:** increasing fuel prices were cited as impacting margins; and SMEs also believed that **Brexit uncertainty** was negatively affecting business continuity and levels of sales. Related to this, SMEs also believed that **non-British drivers were exploiting minimum wage law** and undercutting their prices.

**SMEs are also experiencing time poverty: congestion** levels were a key issue impacting business' ability to deliver goods to clients effectively; and smaller companies with no back office and who spent the majority of their time on the road found **administration was a significant burden**, especially ensuring they remained compliant with rules and regulations and the additional requirements associated with transporting goods in low emissions zones.

At the time of our research, **COVID-19** was also starting to impact sales and driver safety.

**The terminology associated with emissions reductions influenced perceptions and engagement. The term 'fuel efficiency' prompted more neutral responses than 'emissions'** and most agreed that fuel efficiency was most important to them as this impacted on business margins. However, only a minority were doing a 'formal' analysis of data to understand how to improve fuel efficiency. **Emissions were associated with the high expense of upgrading vehicles to the latest standards** and businesses using Euro 6 engines believed these were already fully efficient and existing driver training dealt with how to keep emissions low.

## **Effective incentives in getting SME road operators to engage with voluntary emission reduction schemes and adopt emission reduction practices / behaviours**

The literature review highlighted three types of initiative that may provide the shortest payback periods and therefore may result in greater take-up among SMEs if government were to promote these to businesses. A significant body of evidence demonstrated the benefits of **eco driver training**, with an

average payback period of 12-18 months or less and a 15% average reduction in fuel use and CO<sub>2</sub> emissions. Research also reported **telematics** offering savings of around £3,600 per annum through more efficient driving, although uptake of telematics among SMEs is currently around 20%. A range of vehicle adaptations with varying payback periods were identified in the literature review. Existing research on **alternative fuels** cited low adoption rates of gas HGVs and electric vehicles with payback periods of 5+ years. Latest evidence suggests that natural gas vehicles may have more potential for road freight operators because of 2-4-year payback periods but that emissions reductions are small if fossil gas is used.

**In the qualitative research, eco-driver training and telematics offered most and demonstrated the highest levels of awareness amongst SME operators.** Businesses were aware of the importance of driver behaviour in determining fuel efficiency with many training new and inexperienced drivers in-house or incentivising drivers with bonuses. However, relatively few were aware of eco-driver training courses. Those who had taken this training reported that it helped to save money on insurance and improve driver skills and behaviour. Critics of eco-training placed less faith in driver ability to change their behaviour long term or the ability to compensate for intractable factors such as congestion, weather, vehicles types / loads. Others doubted that eco-driver training would deliver any additional benefits to either the existing Certificate of Professional Competence (CPC), which had failed to engage some drivers, or training delivered by vehicle manufacturers. Above all, it was important for eco-driver training to be practical, with simple and clear content.

**There were mixed levels of awareness, knowledge, usage, and motivation to use telematics systems.** However, SMEs that make use of this technology were motivated by the range of functionality offered by telematics systems, the relatively inexpensive outlay, and potential long-term benefits: current users cited the ability to analyse driver behaviour and their impact on fuel efficiency as well as information on route and traffic management systems. Non-users need to be convinced of how systems could be tailored to their business needs and budgets before they would be willing to invest.

**There was a relatively high uptake of vehicle adaptations** among businesses especially cab and roof fairings, side panels and wind deflectors. Aerodynamics were fitted with the aim of improving fuel efficiency, and some experienced improvements, especially those driving newer vehicles or doing long distance motorway driving. Businesses using older vehicles were not as convinced. Several cited the cost of retrofitting as an issue and payback periods seemed excessive for some types of aerodynamics. Non-users cited vehicle design and / or business sector requirements as barriers to retrofitting, and some believed the additional weight of aerodynamics would damage vehicles.

**There were three key barriers to considering alternative fuels:** scepticism about the long-term benefits of using alternative fuels and the 2-4-year payback period (especially when SMEs claimed to be updating vehicles every 3-5 years); the initial purchase price of an alternative fuel vehicle and prohibitive ongoing running costs; and the current lack of available refuelling points in the UK.

### **Additional support for SME road freight operators seeking to adopt emission reduction technologies, practices and behaviours**

The literature review identified three types of incentives which had been explored previously: **prizes** for achieving targets related to saving fuel, adapting vehicle designs, using alternative fuels or eco-driving; **financial incentives** (e.g. grants, preferential rate loans, tax breaks) provided by government to enable vehicle purchase or adaptations; and **independent accreditation schemes** to provide independent validation of fuel savings from a range of retrofit technologies.

In the qualitative research, **financial incentives generated the most interest and offered the most potential to engage SMEs**. Many claimed they lacked capacity to make further improvements to fuel efficiency / emissions without such an incentive. The majority envisaged using loans to upgrade their fleet, resulting in less vehicle 'downtime' and spend on maintenance and consequently better margins. Grants resonated with businesses who had benefited from these in the past. More information on tax breaks would be required before businesses would commit to this type of incentive. There was some scepticism towards this initiative from businesses with experience of previous overhauls of the freight industry who had not been eligible to apply for similar financial incentives in the past. The majority of **SMEs believed that the amount of time and effort involved in winning a prize would outweigh the monetary value** of the prize offered. **Independent accreditation schemes were considered a 'nice to have'**. Members of these schemes offered mixed views of the amount of work involved in reporting required by such schemes. The two key benefits of scheme membership cited were the ability to bid for work in London, and the ability to charge clients more when bidding for work.

The literature review provided limited information about preferred sources of advice and support among SMEs but suggested that they **would collaborate more to reduce emissions if DfT provided official guidance** to reduce fears of breaking anti-competition laws. **Businesses consistently sought out information about rules and regulations** to ensure they were fully compliant. **The most frequently cited source of information was trade associations**. Non-members accessed free articles and seminars through social media. **Trade magazines** were often mentioned, and attention was also paid to **email bulletins from the DVSA and the Traffic Commissioner who informed about law changes**.

### **The most effective ways of communicating advice to SMEs and simultaneously engaging with them to provide effective feedback**

**Businesses ranked central government information as the most trustworthy source of information**. However, improving potential future engagement may be dependent on government acknowledging the importance of SMEs to the industry and providing tailored support. **Trade associations were also considered trustworthy because of their industry focus and interest in fairness for SMEs in new rules and regulations**.

There was no consensus on which channel would be best to engage SMEs. However, **email communication received the highest support**, as businesses could access this information whilst on the move. **Most preferred short, relevant, and informative emails focused on updates**, either directly from the DVSA or via the RHA/FTA. **Businesses wanted DfT to communicate directly with them or through intermediaries such as CPC training** and suggested that **DfT could engage more closely at trade association conferences or industry events** and use radio or press advertising to develop a more positive style of engagement with SMEs.

## SUMMARY OF RECOMMENDATIONS

### Overcoming barriers to engagement

#### Recognise SMEs time poverty:

- When communicating with SMEs choose channels they are more likely to pay attention to (such as email),
- Send messaging via sources they are likely to pay attention to (such as central government, freight trade associations);
- Ensure messaging is simple, clear and concise.

#### Recognise there is a lack of engagement with emissions reduction:

- Demonstrate that Government understands the pressures on small and medium sized businesses;
- Support SMEs on areas that resonate most with small businesses such as ways to improve fuel efficiency, minimising costs, improving driver performance or training, ways to reduce time spent on administration; how to increase competitiveness or effectiveness in the marketplace;
- Messaging needs to offer ways to empower small businesses in a competitive industry.

#### Recognise SMEs are also cash poor:

- Offer financial incentives so small and medium sized businesses can take advantage of ways to improve fuel efficiency, such as tax breaks on fuel; grants to help businesses make their fleets more effective; and loans to upgrade fleets on more favourable terms than banks

### Effective incentives to engage road freight operators with voluntary emission reduction schemes / practices / behaviours

#### Inform about and support eco-driver training:

- Provide eco-driver training courses to suit small company budgets and short time available for training (ideally free or affordable payment terms)
- Aim for courses to help company owners to reduce operating costs (e.g. spend on tyres, increase of x% fuel efficiency)
- Ensure active and engaging content aimed at new and inexperienced drivers to take account of varying levels of learning styles
- **Inform about benefits of telematics systems:**
  - Inform how telematics systems can improve fuel efficiency and how they can be tailored to meet SME needs / budgets

### Effective ways of communicating with and supporting SMEs

#### DfT should work with a variety of organisations that SMEs trust

- This will help to open up lines of communication with freight trade associations, MOT servicing providers, vehicle dealerships, as well as DVSA and Traffic Commissioner

#### Link messaging with key interactions such as CPC training and MOTs

#### Use a multi-channel approach to deliver messaging

- Email is the most versatile channel but others such as radio, established blogs and events can spread messaging quickly and help SMEs start to trust government and engage more fully

### **Inform about initiatives to help SMEs**

- Communicate about how government is working with industry to develop initiatives to benefit SMEs



## 2 Background & methodology

Following the Freight Carbon Review<sup>1</sup>, the DfT identified a number of barriers that Small and Medium size Enterprise (SME) road freight sectors face in terms of their ability to reduce emissions. However, there is very little knowledge about SME road freight operator behaviour and how this can be influenced and how best to communicate with them. Membership numbers of the main sector trade representative organisations suggests that there could be up to 30% of operators who are not members of trade organisations and are less likely to engage with them; a large number of these are thought to be small or medium sized operations. As a result, Ipsos MORI were commissioned to undertake a combination of in-person and telephone depth interviews to identify the barriers to engagement, to test the acceptability of emissions reduction measures and to explore potential communication methods for this hard-to-reach sector.

### 2.1 Research objectives

The specific aims of the project were to explore and identify effective ways to communicate with and engage small and medium size road freight operators using HGVs (7.5 tonnes and above), investigate the barriers to the uptake of emission reduction technologies, behaviours and practices and make recommendations on how to obtain buy-in / improve the level of engagement and incentivise small and medium sized road freight operators on this agenda

To achieve these aims, the following research questions were developed:

- What existing barriers prevent road freight operators, especially small and medium sized companies, from adopting emission reduction technologies, practices and behaviours?
- What incentives would be most effective in getting small and medium sized road freight operators to engage with voluntary emission reduction schemes and adopt emission reduction practices and behaviours?
- What are the most effective ways of communicating advice to small and medium sized road freight operators to take advantage of emissions reduction technology and simultaneously engaging with them to provide effective feedback?
- What more can the Department for Transport / Government do to support road freight operators seeking to adopt emission reduction technologies, practices and behaviours?

### 2.2 Methodology

#### 2.2.1 Stage 1 – Evidence Review

In order to steer the questions for the qualitative fieldwork, Ipsos MORI was asked to conduct a literature review on the associated payback periods of voluntary actions and what works in terms of communicating with/incentivising/securing engagement from SME road freight operators. Literature was sourced based on the following:

- Recommendations from DfT
- More recent reports/websites from relevant organisations (e.g. Energy Saving Trust)

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<sup>1</sup> Freight Carbon Review 2017, 2017, Department for Transport <https://bit.ly/3bHdRUR>

- Manual internet searches using key terms (e.g. “SME”, “road freight”, “payback period”, “emissions”)

In total, we sourced **39 pieces of evidence**. All of these were logged in an analysis spreadsheet, checked for relevance, and then coded. Our initial evidence review found three main categories of voluntary actions to reduce emissions:

- Driver behaviour
- Vehicle adaptations
- Alternative fuels

We used these, along with existing measures of their **payback periods**, in our interview topic guide to test existing awareness and enablers/barriers to adoption.

Previous research also identified **prizes** and public recognition, independent **accreditation** and **financial incentives** as potential motivators for voluntary measures but this was yet to be tested with SME road freight operators. The existing evidence also provided different ideas about **advice and support**, with suggestions varying from central government to trade associations as the body responsible for taking this on. As a result, this formed another part of our interview guide.

Throughout this report, we have referred to the relevant literature, where this aligns with our findings and where we found contrast.

### 2.2.2 Stage 2 – Qualitative research

As SME road freight operators are a hard-to-reach and rarely researched group, we adopted an experimental methodology. The original intention was to recruit purely from **face-to-face interviews** at truck stops. However, difficulty in recruiting the target group at these locations and external factors outside of the control of the research necessitated switching to **telephone interviews** for the majority of the interviews. Our initial selection of research sites focused upon motorway service stations on the Strategic Road Network, however the low response rate at this type of site and haulier feedback confirmed that road freight operators prefer truck stops dedicated to their profession (a survey by Transport Focus also finds that professional visitors are the least satisfied group of visitors to motorway service stations, describing them as ‘expensive’<sup>2</sup>). Additionally, our subsequent research sites were delayed due to road flooding from Storms Ciara and Dennis<sup>3</sup>. Because of delays to fieldwork and mixed success with recruitment at dedicated truck stops we moved to free-find recruitment using one of our approved recruitment suppliers, and we conducted interviews with businesses by telephone. Where face-to-face interviews were possible the results were still included in the project findings.

Please note, all face-to-face fieldwork took place before the UK went into COVID 19 lockdown on 23<sup>rd</sup> March. The telephone interviews spanned the pre- and post-lockdown periods. The majority of phone interviews took place before the lockdown, though some final calls took place up to 6<sup>th</sup> April. When contacting potential interviewees, sensitivity to the global pandemic and its impact upon businesses were taken into account and individuals were assured that they should feel no pressure to take part in the research.

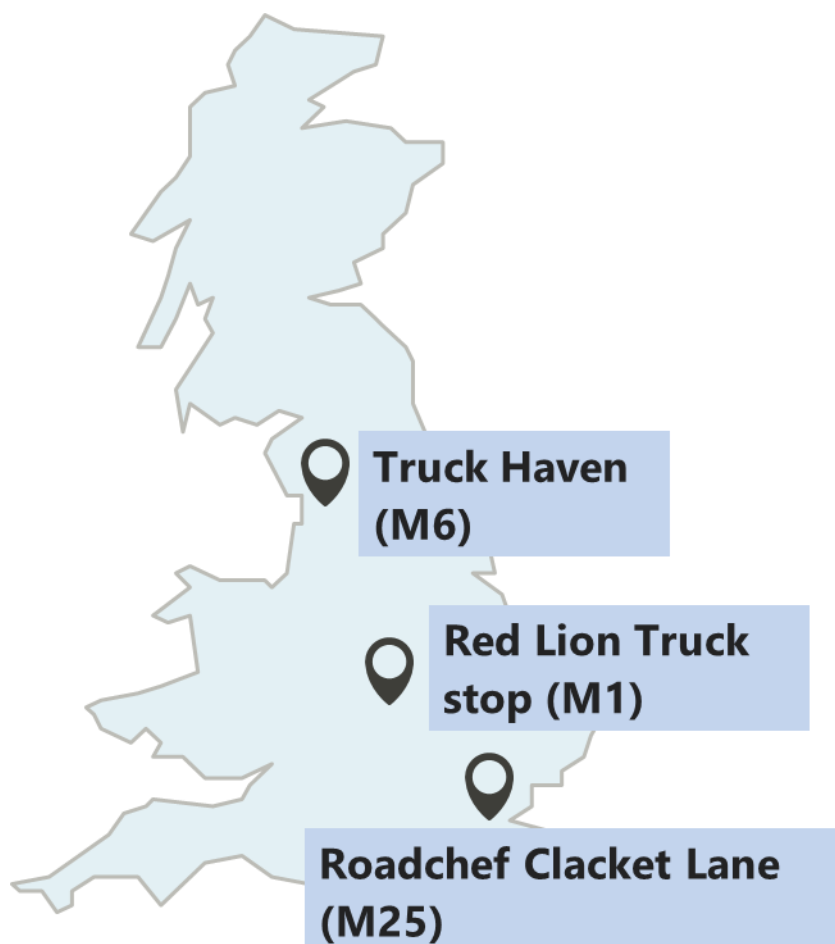
<sup>2</sup> *Motorway Services User Survey Spring 2019*, 2019, Transport Focus <https://bit.ly/3cJWp3h>

<sup>3</sup> <https://www.metoffice.gov.uk/weather/warnings-and-advice/uk-storm-centre/storm-dennis>

Participants for both face-to-face and telephone interviews were screened using the following quotas:

<p>Role</p>	<p>Target sole trader owner of their own road freight business or a fleet manager (All to be able to discuss knowledgeably issues regarding fleet and vehicle design, and operation, and be in a position of sufficient authority to make operational decisions). Drive within the UK for over half of their journeys.</p>
<p>Fleet</p>	<p>All to be driving/operating HGV vehicle (7.5 tonnes+) on a regular basis (the sample also included fleets with a combination of vehicles above and below 7.5 tonnes)</p>
<p>Size of SME</p>	<p>Spread of company size across sample– all to be under 50 employees.</p>

Participants were found by field recruiters at three truck stops around England (see below) and across the United Kingdom via telephone recruiters.



**Figure 1 - Location of face-to-face fieldwork locations**

The table below outlines the final sample split by interview method and size of company.

	Face-to-face	Telephone	Total
Micro (1-10 employees)	10	17	27
Small (11-49 employees)	3	8	11
Medium (50+ employees)	1	1	2
<b>Total</b>	14	26	40

### 2.3 The research materials

A discussion guide to shape the conversations in depth interviews was designed by Ipsos MORI in collaboration with the Department for Transport (see Appendix 2 for the full guide). The guide was intended to be a flexible document, allowing the moderator to follow up interesting lines of inquiry as they emerged, but also to ensure that there was commonality of themes discussed across the research sessions. The topics covered were:

- Participant/business background
- Current awareness of potential voluntary actions
- Enablers/barriers for voluntary actions
- Incentives to promote voluntary actions
- Advice and support

During the interviews, participants were presented with stimulus materials designed to support discussions. Stimulus materials included ways for small businesses to improve fuel efficiency and reduce emissions, together with potential incentives to motivate engagement with the emission reduction agenda. The full stimulus is included in Appendix 3.

### 2.4 Interpreting qualitative findings

Qualitative research is illustrative, detailed, and exploratory. It offers insight into the perceptions, feelings, and behaviours of people. Owing to the small sample size and the purposive nature with which it was drawn, findings from this research cannot be considered quantifiable conclusions from a statistically representative sample. Evidence in this report is based on participants' perceptions. It is important to remember that even though some perceptions may not be factually accurate, they represent "the truth" to the participants and as such, are vital in understanding their attitudes and views.

In summary, **qualitative** research:

- Explores the **range of attitudes and opinions** of participants in detail.
- Provides an insight into the key **reasons underlying** participants' views.
- Leads to findings that are **descriptive** and **illustrative**, not statistically representative.

- Involves participants often holding **contradictory views**.
- Provides with detailed information and can become **more informed** than the general public.

#### How to read the report

Throughout the report we have referred to SMEs as interviewees and included indications of company size where relevant. We have provided evidence through verbatim quotes where these illustrate findings. To protect participant anonymity, quotations have been attributed to key characteristics including the method they participated in and type of SME.

## 3 Context

### 3.1 SME road freight operators

The SME road freight sector is far from homogenous, with a variety of different business models. Below, we set out a rough typology reflecting the patterns found across the interviews.

#### 3.1.1 Sole traders/micro businesses

This group consists of the smallest companies, with between one and ten trucks. As observed in previous research<sup>4 5</sup>, they described themselves as being particularly time poor, with a limited or entirely absent back office and most company members on the road most of the time.

These interviewees often described their type of business as in decline. Though accurate data on fleet sizes is hard to access, a report using Freedom of Information requests provides some insight; from 2013 to 2015, the number of O-licenses for fleets of 1-10 truckers dropped by 8% from 60,669 to 55,688.<sup>6</sup>

These companies were also less likely to be members of trade associations. Micro businesses tended to either:

- Carry a variety of different loads over long distances across the UK and into Europe; or,
- Carry the same type of loads, often in relation to agriculture, over shorter distances.

These companies were often structured around family relationships, with a gendered split of labour (men as drivers, women helping with administration).

#### 3.1.2 Small-medium businesses

The slightly larger companies (11-50 trucks) tended to have more back-office functionality, including a transport or fleet manager job role. They were also more likely to be members of trade associations and reported more active engagement with the wider road freight industry. In contrast to the decline referred to above, companies of this size saw the number of O-licences increase by 6% from 4,764 in 2013 to 5,050 in 2015.<sup>7</sup>

While some of these companies followed the same models as above (long-distance haulage/local freight), several of these sized companies carried highly specialised loads (e.g. equipment for railway maintenance, serving local airports).

### 3.2 Current issues facing the sector

The following themes appeared most often when asked about the most pressing issues facing the road freight sector:

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<sup>4</sup> *EU Exit Research: Driving in the EU – hauliers, coach drivers and haulier management*, 2018, Britain Thinks for DfT (unpublished)

<sup>5</sup> *Road Freight Electronic Data – Discovery*, 2019. Lagom Strategy for DfT. <https://bit.ly/2Tqb7r6>

<sup>6</sup> *Overview of The UK Commercial Vehicle Industry*, 2016, MotorTransport for Texaco <https://bit.ly/2ZbH1sB>

<sup>7</sup> Ibid.

- **Rules and regulations** – other pieces of research confirm that smaller companies find administration to be a significant burden.<sup>8 9 10</sup> Similarly, ‘reducing the regulatory (and cost) burdens on industry’ was the fourth most important policy action for government in an FTA survey.<sup>11</sup>
- **Brexit uncertainty** negatively affecting business continuity and levels of sales, with previous qualitative research finding frustration on this issue<sup>12</sup> and 57% FTA members stating that this was a problem in 2018.<sup>13</sup>
- **Non-British drivers** allegedly undercutting British drivers through exploitation of minimum wage law. Interviewees who mentioned this often used this as a rationale for supporting Brexit. This is confirmed by an RHA survey with their members, showing that 62% SMEs supported leaving compared to only 17% of larger companies.<sup>14</sup>
- **COVID-19** and its impact upon sales and driver safety. Surveys by RHA<sup>15</sup> and FTA<sup>16</sup> report high levels of impact and concern among their members (see 1.3 above regarding how this impacted our methodology)
- **Congestion** increasing fuel costs and delaying deliveries, confirmed by surveys with the wider road freight industry as a key issue and the most important policy action for government.<sup>17 18</sup>
- **Increasing fuel prices**, with cutting fuel duty as the second most important policy action for government.<sup>19</sup>
- Introduction of **low emissions zones** – ‘ensuring towns and cities promote “freight-friendly” policies and avoid restricting HGVs’ was seen by FTA members as the third most important policy action for government.<sup>20</sup>

### 3.3 Views and awareness of carbon emissions and fuel efficiency

Though the price of fuel and regulations are clearly relevant, **carbon emissions rarely came up unprompted**. Similarly, a survey with FTA members found that ‘providing incentives for alternative fuels and carbon reduction’ was only the 7<sup>th</sup> most important policy action for government<sup>21</sup> and ‘reducing carbon dioxide’ was only the 5<sup>th</sup> most important priority for the organisation’s board.<sup>22</sup> Once this topic

<sup>8</sup> *EU Exit Research: Driving in the EU – hauliers, coach drivers and haulier management*, 2018, Britain Thinks for DfT (unpublished)

<sup>9</sup> *Road Freight Electronic Data – Discovery*, 2019. Lagom Strategy for DfT. <https://bit.ly/2Tqb7r6>

<sup>10</sup> *Engaging small and medium-sized enterprises (SMEs) in the low carbon agenda*, 2015, Conway, E., *Energy, Sustainability and Society*, 5 (1) <https://bit.ly/3jl9NJc>

<sup>11</sup> *Logistics Report 2018*, 2019, FTA. <https://bit.ly/3cNmn6c>

<sup>12</sup> *EU Exit Research: Driving in the EU – hauliers, coach drivers and haulier management*, 2018, Britain Thinks for DfT (unpublished)

<sup>13</sup> *Logistics Report 2018*, 2019, FTA. <https://bit.ly/3cNmn6c>

<sup>14</sup> *Britain’s road hauliers back ‘Leave’*, 2016, RHA <https://bit.ly/2WIHFfE>

<sup>15</sup> *A summary of survey responses on the impact of COVID-19 on the haulage industry*. 2020, RHA <https://bit.ly/2ycCiMf>

<sup>16</sup> *Coronavirus Logistics Impact Survey: 2020*, FTA. <https://bit.ly/2X42m4E>

<sup>17</sup> *Logistics and Coach Manager Survey: England’s strategic roads*, 2018, Transport Focus. <https://bit.ly/3cFjJPO>

<sup>18</sup> *Logistics Report 2018*, 2019, FTA. <https://bit.ly/3cNmn6c>

<sup>19</sup> Ibid.

<sup>20</sup> Ibid.

<sup>21</sup> Ibid. This issue was 7<sup>th</sup> below 1. Invest in road improvements 2. Cut fuel duty 3. Ensure towns and cities promote ‘freight-friendly’ policies and avoid restricting HGVs 4. Reduce the regulatory (and cost) burdens on industry 5. Improve truck parking and driver roadside facilities 6. Promote a positive image of logistics to young people (and the public)

<sup>22</sup> Ibid. This priority was 5<sup>th</sup> below 1. Site safety 2. Reducing accidents on the road 3. Staff security 4. Ethical trading. However, it was above 6. Reducing air pollution 7. Reducing noise pollution 8. Community outreach programmes

was raised with our interviewees, they responded in various different ways. Some argued that it was an issue that their sector needed to urgently address.

*"Everything should be about the emissions that we're putting out. It's a big vehicle that we're running, and what it's putting out has a dramatic effect"*

### Micro / Teledepth

Other interviewees agreed that it was a pressing issue but, as Chapters 3 and 4 of this report demonstrate, they argued that they currently face too many barriers to take up emissions-reducing initiatives. This aligns with cross-sector research on engaging SMEs on adopting low-carbon measures:

- A survey of 141 respondents across 54 different Standard Industry Classification Codes found that SMEs express frustrations around time and money but are 'prepared to engage with the low carbon agenda, given appropriate support'<sup>23</sup>
- The ESRC-funded *Growing Greener* project<sup>24</sup> has found that SMEs agree that sustainability is important but currently believe they can only respond to regulations rather than be an active part of the change as they find it hard to balance short-term/self-enhancing and long-term/self-transcending business goals<sup>25</sup>
- A report by the Construction Industry Training Board found that although '[SMEs] are aware of the energy efficiency agenda, they need support in identifying benefits to business of new technologies'.<sup>26</sup>

For many interviewees, the term 'emissions' often prompted negative comments. This was often in relation to the high expense for SMEs when upgrading the vehicles to the latest emissions standards (e.g. from Euro 5 to Euro 6), as has been observed in other freight research<sup>27</sup>, and also in relation to the high charges of low emission zones, which aligns with wider attitudes to these zones.<sup>28</sup>

'Fuel efficiency' prompted more neutral responses, with most interviewees agreeing this was important, though some believed that drivers who work for vehicle owners would care about this less. A few interviewees argued that driver training already included guidance on keeping emissions low and improving fuel efficiency, with these concepts commonly understood across the sector.

*"Well, obviously we're all polluting the environment and wasting fuel is not the way to go."*

### Micro / F2F depth

<sup>23</sup> *Engaging small and medium-sized enterprises (SMEs) in the low carbon agenda*, 2015, Conway, E., Energy, Sustainability and Society, 5 (1) <https://bit.ly/3jl9NJc>

<sup>24</sup> <http://business-school.open.ac.uk/research/growing-greener>

<sup>25</sup> *Growing green?: Co-creating an evidence-based model of SME engagement*, 2017, Blundel, Richard; Fawcett, Tina; Shaw, Chris; Hampton, Sam and Westall, Andrea In: ISBE Annual Conference 2017, 8-9 Nov 2017, Belfast <https://bit.ly/300pxiN>

<sup>26</sup> *Understanding Future Change in Construction*, 2010, Construction Industry Training Board. <https://bit.ly/3cJfrqD>

<sup>27</sup> *Attitudes Towards New Technology within the UK Freight and Logistics Industry*, (forthcoming), Ipsos MORI for DfT

<sup>28</sup> On whether people think that Low Emission Zones are mostly there to make money, around the same amount agree (35%) as disagree (32%). Table NTAS0201b. *Attitudes about road journeys and the environment regarding low emission zones (LEZ): England, 16+, 2019.* <https://bit.ly/2P16Cyc>



*"70% of drivers understand carbon emissions but 90% of them don't care because they are not company owners and are not paid that well"*

### **Small / teledepth**

However, some interviewees argued that they were already doing as much as they could do, with Euro 6 engines as 'almost zero emissions' and the belief that as long as they pass their MOT their emissions must not be too high.

*"I've never really thought about [carbon emissions]. It sort of is what it is."*

### **Micro / Teledepth**

Whilst a minority of businesses were doing a 'formal' analysis of data to understand how to improve fuel efficiency, several micro businesses discussed monitoring the fuel prices and discounts offered by different fuel company card providers. Where offered, businesses also monitored any other information or statistics provided by fuel company credit card providers. This aligns with a piece of cross-sector research into SMEs which found that whilst many had taken steps to reduce their carbon impact, most do not monitor or set targets for managing carbon usage.<sup>29</sup>

Those with the newest vehicles such as Euro 6s thought these vehicles were the most efficient and therefore additional analysis would not be of any further benefit, whilst others trusted the advice and expertise of manufacturers about ways to be more fuel efficient.

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<sup>29</sup> *Engaging small and medium-sized enterprises (SMEs) in the low carbon agenda*, 2015, Conway, E., Energy, Sustainability and Society, 5 (1) <https://bit.ly/3jl9NjC>

## 4 Reactions to initiatives

Three key types of initiatives were explored with SMEs in the qualitative research stage.

### Overview

Overall, the initiatives which offered most potential to engage SMEs were eco-driver training and telematics. Businesses of all sizes accepted that driver behaviour was an important factor in determining fuel efficiency and small and medium size businesses were already training their drivers in-house if they were new to the company or relatively inexperienced. Eco-driver training could therefore be positioned as a way for operators to demonstrate the impact of improved driver performance and its role in fuel efficiency. It would also allow SMEs to better target the time and effort spent on in-house driver training by tying it more closely to improvements in fuel efficiency and / or other cost savings such as reduced maintenance. In addition, telematics systems resonated with all but the smallest companies because of the range of functionality offered and the relatively inexpensive outlay required, when compared with the potential long-term benefits derived.

Reactions to each of the initiatives explored with SMEs are discussed in more depth below including details of awareness, usage, perceived benefits and disadvantages, and motivations to consider each initiative. The stimulus shown on each of the initiatives in the interviews is included in Appendix 3.

### 4.1 Driver behaviour

#### 4.1.1 Existing evidence

There is a significant body of existing evidence demonstrating the benefits of **eco driver training**. According to the studies cited in DfT's *Freight Carbon Review 2017*<sup>30</sup>, 'eco-driving' training can have an average payback period of 12-18 months or less, with medium-sized companies having a shorter payback time than small companies due to relative fleet sizes. Further, the Energy Saving Trust's training has been found to save an average of 15% fuel and CO<sub>2</sub>.<sup>31</sup> CSRF's report, *Decarbonising Road Freight* also includes 'driver fuel efficiency training' and 'reduced engine idling' in their scenario that only includes interventions with payback period of up to three years<sup>32</sup>. The evidence review could not find any further evidence directly calculating the payback period of eco-driving training, though subsequent policy papers have continued to recommend this as a means to reduce GHG emissions. A case study by The Energy Saving Trust on Bibby Distribution found that their efficient driving programme, combined with telematics, reduced idling from 4% to 2%, saving 3000 tonnes of CO<sub>2</sub><sup>33</sup>. However, as this company is not an SME, this outcome may not be transferable.

The existing evidence base on the benefits of **telematics** is less consistent. While *the Freight Carbon Review* reports that telematics can save around £3,600 per annum, this document also highlights that uptake of this technology among small operators is around 20%, with limited engagement from operators running fleets with less than five vehicles.<sup>34</sup> This is confirmed by other reports; fleet management was

<sup>30</sup> *Freight Carbon Review 2017*, 2017, Department for Transport <https://bit.ly/3bHdRUR>

<sup>31</sup> *The Road to Zero: Next steps towards cleaner road transport and delivering our Industrial Strategy*, 2018, Department for Transport <https://bit.ly/3bOYGJr>

<sup>32</sup> *Decarbonising road freight*, 2019, The Centre for Sustainable Road Freight for Government Office for Science <https://bit.ly/3bKczs0>

<sup>33</sup> *New Vehicles and Telematics at Bibby Distribution*, 2018, Energy Saving Trust <https://bit.ly/39vfzJr>

<sup>34</sup> *Freight Carbon Review 2017*, 2017, Department for Transport <https://bit.ly/3bHdRUR>

identified by a DECC report as the biggest potential energy saving smart technology for SMEs, saving around £6 billion across all SMEs. However, within this £6 billion, £2.6 billion is to be saved by medium business, £3.4 billion is to be saved by small businesses, while micro businesses are unlikely to save any energy costs with this technology.<sup>35</sup>

### Learning from other sectors

The Construction Industry Training Board (CITB) has invested large sums of money into sustainability training. The latest report for their *Supply Chain Sustainability School*<sup>36</sup>, a free online learning environment, shows that although only 15% of its members are SMEs, 60% of SMEs attributed the outcome 'reduce carbon' to what they learnt at the school.<sup>37</sup> The school also includes a lesson provided by the Centre for Sustainable Road Freight.<sup>38</sup> Another project dedicated to apprentices, *Carbon Coach*, again using online learning, received positive feedback for allowing students to complete it in their own time. After an initial pilot, 15 clients have provided the course to their apprentices, including Northumbrian Water and students of Newcastle University.<sup>39</sup>

Since 2016, there has been an equivalent for the road freight sector, the National Logistics Academy, providing 'training, apprenticeships and workforce development to large, levy paying national logistics employers through a nationwide network of specialist logistics training providers.'<sup>40</sup> This levy is only paid by employers with a pay bill over £3 million, while those smaller pay 5% of training with the rest covered by government.<sup>41</sup> Unlike the CITB, there is limited reference to sustainability, with only one case study referring to eco driver training.<sup>42</sup> The FTA<sup>43</sup> and the RHA<sup>44</sup> would both like more flexibility around the use of levy funding.

#### 4.1.2 Eco driver training

Many small and medium sized businesses were conducting in-house driver training to maximise fuel efficiency. Practices varied across companies, but those companies conducting in-house driver training were aware of how important driver performance was in maximising fuel efficiency. In these companies, as a minimum, training included a manager accompanying a driver on a journey to review their driving skills at least on an annual basis. Some companies also reported using seminars and external training in addition to in-house reviews and a couple of business owners had taken eco-driving training courses with their drivers.

*"We do have a course already aimed at eco safe driving it's a big part of everything we teach, less so on the smaller vehicles, with the larger stuff it plays a big part in the style of driving we teach, getting rid of unnecessary gear changing, and we talk about it from fuel economy and emissions points of view – it comes up in all courses, keeping vehicles moving, planning ahead"*

<sup>35</sup> *Potential of Smart Technologies in SMEs*, 2016, Arup for DECC, <https://bit.ly/2Zgmxiw>

<sup>36</sup> *Supply Chain School - rising to the sustainability challenge*, 2020, Construction Industry Training Board <https://bit.ly/30J3CM4>

<sup>37</sup> *Supply Chain Sustainability School - Annual Impact Performance Report*, 2020, Construction Industry Training Board <https://bit.ly/3bJdlp6>

<sup>38</sup> <https://www.supplychainschool.co.uk/?s=freight>

<sup>39</sup> *Esh Group trains the next generation in carbon reduction*, 2020, Construction Industry Training Board <https://bit.ly/3iQ1gnJ>

<sup>40</sup> <http://www.the-logistics-academy.co.uk/about/>

<sup>41</sup> <http://www.the-logistics-academy.co.uk/employers/apprenticeship-levy/>

<sup>42</sup> *Danny Jackson - LGV Apprentice at Aldi*, 2020, National Logistics Academy <https://bit.ly/3g74AZk>

<sup>43</sup> *Without standards, Apprenticeship Levy is simply a tax on logistics*, says FTA, 2019, FTA <https://bit.ly/3022ynn>

<sup>44</sup> *Many haulage operators are unaware they will have to pay a new tax*, warns RHA, 2016, RHA <https://bit.ly/3hx2Bh8>

**Micro / Teledpth**

*"We use eco-driver training days and do see a return on it. We use analytics to give detailed reports daily and weekly, we identify the worst drivers and work with them to get their MPG up, fuel efficiency up, driver score up, teaching them to crawl up to the traffic lights instead of actually stopping. It saves on fuel and reduces CO2"*

**Small / teledpth**

Companies who did not have formal in-house driver training generally reported a lack of time as a barrier. This was more prevalent in micro businesses where both owners and drivers were 'on the road' for the majority of their working week, as identified by previous research<sup>45</sup>. However, it was also evident among these company owners that they believed it was difficult to overcome poor driver performance on a long-term basis, even where training had been provided to staff.

In contrast, others believed that drivers who were relatively low-paid employees could be incentivised through financial means such as bonuses, or through 'friendly competition' with other drivers in the fleet.

There were relatively low levels of awareness of eco-driver training courses among SMEs. Those companies who had completed eco-driver training described it as being similar to an advanced driving test, and motivations to take this type of training included the ability to save money on insurance and improve and update skills and behaviour among drivers and company owners.

*"I went to one years ago which taught block gear changing. Not sure I agreed with everything I was taught, you also need to take into account how much load you have, road conditions. But I'm more than happy to attend a course every couple of years"*

**Micro / teledpth**

*"I haven't heard of eco-driver training but we are always looking to train drivers better, we do monthly checks on them already and we've had some seminars for drivers to understand about emissions and fuel saving"*

**Small / teledpth**

Those who believed that drivers made a key difference to fuel efficiency were more likely to consider eco-driver training. Some preferred to reserve judgment until they knew more about the format and style of training as they believed that this needed to be practical in order to engage drivers, and that content needed to be simple and clear.

Motivations to consider eco-driver training were also influenced by past experience of the Certificate of Professional Competence (CPC) training, which received mixed views in terms of its perceived value. Those with positive experiences of CPC training were complimentary about the quality of tutors and felt the training had helped their drivers to understand the effect of their driving behaviour on fuel efficiency and resulted in improved fuel efficiency. Negative views of CPC training came from those who criticised

<sup>45</sup> *Efficient Driving: A Rapid Evidence Assessment for the Department for Transport*, 2016, Brook Lyndhurst for DfT <https://bit.ly/3696FIY>

‘passive’ teaching methods such as an over-reliance on watching videos, claiming that these were less likely to engage drivers or result in changed behaviours.

A few who had experience of the ‘Safe and Fuel-Efficient Driving’ (SAFED) training courses and who valued this type of training questioned whether eco-driver training would be similar.

*“Drivers are key to efficient driving, it’s good to reduce costs and help the environment but I wouldn’t want nothing too involved, I don’t want to put people off, short videos or an app but nothing academic”*

**Small / teledepth**

Three types of interlocking barriers to considering eco-driver training emerged:

<p><b>Operators / Drivers Question the conceptual value of eco-driver training</b></p>	<p><b>Lack of time</b></p>	<p><b>Eco-training delivered elsewhere</b></p>
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Several factors were cited when determining where operators stood on the conceptual value of eco-driver training. Some questioned whether there would be **any further value** gained from additional types of driver training over and above CPC training or their own in-house training, whilst others believed that intractable factors such as traffic congestion, weather conditions, vehicles types / loads negated the value of any further learnings from eco-driver training.

Some business owners with many years in the industry believed they had sufficient knowledge about emissions reductions, whilst others believed that eco-driving was a matter of common sense or that poorly performing drivers would improve through experience or in-house training rather than additional formal training.

The views doubting the conceptual value of eco-driver training were expressed by a range of business sizes but tended to be stronger among those who held a more negative attitude about the ability of drivers to improve their behaviour. These businesses spoke more frequently about the competing pressures of remaining profitable, satisfying client needs, and complying with industry rules and regulations. In these circumstances, a focus on cost savings and day to day running of their business took precedence over engagement with emissions reductions or environmental issues.

*“I always think people will drive differently if they are paying the fuel bill, some are conscientious and try their best regardless, but it seems like people want to drive as fast as they can. With tippers and being fully freighted, we live and die with the payload, if I said to a driver, ‘I want you to do 30mph and 40mph and I want you to drive very slowly, very efficiently, you’re going to lose work, but you’re also not going to deliver to your employer, your contractor, the loads they want you to do. So, the skill is in balancing”*

**Micro / teledepth**

*"Myself and my son have to go to training after training - CPC, lot of training for railway work, we have to keep certificates up to date, on railway property we have to be trained on every different machine we move – can you understand how many different vehicles that is? So much training gets in the way of running the business"*

#### **Micro / teledepth**

Some believed that the **training they received elsewhere** was of similar value to eco-driver training and cited examples such as vehicle manufacturers providing training on new vehicles, whilst others believed that the improved functionality of newer vehicles, in-house driver training, and specialised training provided by clients were also of equal value to eco-driver training.

*"Scania eco-drive that you can go on when you buy a new Scania, you can attend their course, Iveco do the same, DAF do the same I believe in Eindhoven and all the rest of it, and I know people who have been on them, they said it's interesting. Running in the middle of the night, nothing on the motorway, on cruise control, my fuel efficiency goes up by one and a half miles a gallon"*

#### **Micro / F2F depth**

*"DAF sent someone to coach the driver for a couple of hours when we got the new vehicle but the second the driver is on his own and out on the road he will just put his foot down, everyone is in a hurry nowadays"*

#### **Micro / teledepth**

As already discussed, micro businesses were more likely to be concerned about the day to day pressures of remaining in business and this general **lack of time** meant that considering eco-driver training courses was not a priority.

*"We don't do any training because we've hardly got the time to. With it being a small company, I'm away a month at a time. When I take my break, my long break, I usually go home for it. Then I have too much to do at home, so I don't really bother"*

#### **Micro / F2F depth**

### **4.1.3 Telematics**

There were mixed levels of awareness, knowledge of, usage, and motivation to use telematics systems.

Those already using telematics systems, who tended to be small and medium sized businesses, described different types of features such as GPS tracking systems, predictive cruise control, or features monitoring driver location. Most systems were included as standard or added to newer vehicles. Users appreciated the benefits of being able to track driver locations as this helped when informing clients about expected delivery times or delays and analyse driver behaviour, which in turn helped companies to see which drivers were providing better fuel efficiency on different vehicles. For example, owners were able to show data to drivers to provide evidence of their fuel performance and then use this data to train drivers to improve their driving behaviour and ultimately improve fuel efficiency in each vehicle.

Owners were also able compare the performance of different drivers using the same vehicle and monitor how each vehicle performed when different types of loads were being transported. Some also compared the accuracy of telematics data against other types of fuel monitoring systems. In addition, route and traffic management systems and predictive cruise control helped to improve fuel efficiency.<sup>46 47</sup>

Users were therefore generally positive about the benefits of telematics and whilst they did not cite payback periods specifically, they were willing to continue paying for the systems as they could see that the benefits outweighed the ongoing costs of using the systems.

*“Very useful, good data - why have a guy driving a truck speeding? It’s illegal, he’s been told not to do it, and the next thing that’s going to happen, he’s going to hit his brakes at a junction. I need to know that information before I do anything with anything else. Telematics do work, drivers want to know their figures and want to improve – it costs me £60 a month and tells where the trucks are and if they are stationary, the only disadvantage is I don’t want to overcomplicate things”*

#### **Micro / teledepth**

*“We have GPS tracking systems to tell drivers their driving/braking scores. The newer trucks don’t need a tracking system to give this information as it’s in the dashboard. Drivers have competitions on the WhatsApp groups to see who has the best driving efficiency. We have always had tracking systems for safety and it reduces insurance and we know where trucks are so we can inform clients, and we decided six months ago to update all the trackers so they measured braking”*

#### **Small / teledepth**

Those who were not aware of telematics were pleasantly surprised about the perceived relatively low cost and ease of implementation and the potential benefits to their business. However, non-users generally wanted more evidence on the range of benefits of telematics or how it could be tailored to their own fleet before considering it further, especially if they had heard negative reviews from others or had enquired about introducing a telematics system to their fleet but perceived it to be too expensive.

*“I’ve heard mixed reviews. I wasn’t aware that you could retrofit it and I’m a bit wary about the amount of savings you’ve quoted - maybe it depends on types of driving done. But at £10 pm it sounds interesting, I would like to know more”*

#### **Small / teledepth**

*“It really doesn’t apply to us, we are just small, just the two of us, we know what the other is thinking, and it’s not needed in our case”*

<sup>46</sup> Predictive cruise control has a 1.5% efficiency improvement and one-month payback period for articulated trucks according to: *Freight Carbon Review 2017*, 2017, Department for Transport <https://bit.ly/3bHdRUR>

<sup>47</sup> LERS members ranked ‘Telematics and driver analytics systems’ and ‘Route optimisation’ as the second and third best measures by return on investment (after fuel-efficient driver training), *Logistics Emissions Review 2019 Incorporating the Ninth Annual Report of the Logistics Emissions Reduction Scheme (covering 2018)*, 2019, <https://bit.ly/2TiBNaB>

One SME who had used telematics in the past was put off by an increase in accident rates in their company, whilst another SME reported that the routes chosen by the system did not always make a difference to fuel economy.

## 4.2 Adapting vehicles

### 4.2.1 Existing evidence

The DfT's *Freight Carbon Review 2017*<sup>48</sup> includes the payback periods for numerous vehicle adaptations. The CSRF report from 2019, *Decarbonising Road Freight*<sup>49</sup>, confirms some of these payback periods. These reports formed the basis of the stimulus materials and findings referred to in the following section.

### 4.2.2 Qualitative findings

The majority of SMEs were aware of a range of aerodynamic vehicle adaptations. Uptake of aerodynamics was fairly high but dependent on several factors including the extent to which businesses believed aerodynamics could make a difference to fuel economy. Whilst many SMEs believed that there were advantages to using aerodynamics, some reported that they were unable to retrofit because of the design of specialised or non-standard vehicles.

Others reported mixed success using aerodynamics and believed the benefit of retrofitting did not outweigh the cost, or that factors such as weather conditions or driver behaviour prevented aerodynamics from making a bigger difference. There was generally low uptake of other vehicle adaptations such as low rolling resistance tyres, automatic tyre pressure adjustment and low viscosity lubricants, with SMEs unconvinced about the benefits of replacing their current practices with these adaptations.

#### Aerodynamics

Some reported that aerodynamics had been provided as standard when they bought their latest vehicle whilst others had retrofitted aerodynamics. Cab and roof fairings, side panels and wind deflectors were the most common adaptations cited and company owners requested a specific adaptation mainly to provide additional vehicle safety or to help improve fuel efficiency.

Some also chose to use aerodynamics if they were considered easy to fit, replace or remove, or if it was easier to demonstrate fuel efficiency, for example if a vehicle mainly covered long distances on motorways.

*"I've heard all about streamlining vehicles so you don't get wind blowing at you. Years ago, I have seen diagrams about what can be done. I can't really do anything [more] with mine, I've got a wind deflector kit, a flat sided trailer and keep the cab and trailer closely coupled up"*

<sup>48</sup> *Freight Carbon Review 2017*, 2017, Department for Transport <https://bit.ly/3bHdRUR>

<sup>49</sup> *Decarbonising road freight*, (2019) The Centre for Sustainable Road Freight for Government Office for Science <https://bit.ly/3bKczs0>



*"If you have a unit, unless you're pulling a fat trailer, heavy haulage or anything like that, then you'll do it with what they call FADK, Full Air Deflector Kit, it just comes as part and parcel"*

### **Micro / F2F depth**

Several barriers emerged for businesses who had not adopted any form of aerodynamics. Those businesses using the newest vehicles believed that manufacturers were producing the most efficient vehicles and that adding further adaptations was therefore not required.

Businesses using older vehicles (such as Euro 5s) were not convinced of the benefits of adaptations for fuel economy and cited good driver behaviour as the most important way to maintain fuel efficiency.

Several businesses cited the cost of retrofitting as an issue and payback periods referenced on the research stimulus seemed excessive for some types of aerodynamics. Others believed their vehicle designs and / or business sector requirements prevented them from retrofitting. For example, businesses transporting goods into Europe reported that cab height restrictions on ferries were a barrier. Others perceived aerodynamics might damage their vehicles and several believed that the additional weight of retrofitting aerodynamics would reduce fuel efficiency.<sup>50</sup>

*"Side skirts cost too much money, a teardrop trailer looks nice and I'm sure it works to some degree but they just add thousands and thousands, no one is paying me to do it, there's no incentive to do it and you won't get payback in fuel, it's just a cost that you can't pay, as a small company"*

### **Micro / F2F depth**

*"We don't have a box trailer so a lot of these don't apply, with a low loaded trailer, they are not practically possible"*

### **Micro / Teledepth**

*"Some of them can't have any as they can snap off when you're joining the ferry to France due to height restrictions"*

### **Medium / F2F depth**

## **Other vehicle adaptations**

### **Lower viscosity lubricants**

Businesses tended to rely on manufacturers or dealers to advise on the correct type of lubricant for their vehicles and were reluctant to change current practices without compelling evidence of the benefits. Those with older vehicles or smaller fleets were concerned about the potential additional cost of low viscosity lubricants and questioned the potential benefits for older vehicles.

<sup>50</sup> In addition, the average gross weight tonnage of HGVs has increased from 17.5 tonnes in 1994 to 22.5 tonnes in 2019. Table VEH0506: *Licensed heavy goods vehicles at the end of the year by gross vehicle weight (tonnes), Great Britain from 1994; also United Kingdom from 2014, 2020*, Department for Transport <https://bit.ly/2WZyMhe>

*"We do use very low viscosity lubricant, we buy it as it's recommended for the vehicle, not because we think it's going to save money, but it probably does save money because there is a longer distance between oil changes"*

**Micro / teledepth**

*"All of our vehicles are on contract maintenance with the dealers and they put in the oil for us and I pay a monthly fee to have the vehicles serviced, it's up to them what oil they put in, not my decision"*

**Small / teledepth**

### Adaptations to exhaust systems

A few businesses spontaneously mentioned making adaptations to their vehicle exhaust systems or using exhaust treatment products. The key reasons for using these adaptations or practices was to improve fuel efficiency and / or reduce emissions although there were doubts about the long-term efficacy of these changes.

*"I've got a Euro 6 which is a year old but we've got to buy AdBlue which can be £25 per week and yet the mpg are probably the same as the Euro 5"*

**Micro / F2F depth**

*"I mean, I've had the exhaust changed. I've had an Eminox put on, like, it's meant to make it more fuel efficient, but that's about it"*

**Micro / F2F depth**

### Automatic tyre pressure adjustment

There were mixed levels of awareness of the benefits of automatic tyre adjustment which influenced perceptions of the benefits of this type of adaptation. Several SMEs perceived that this adaptation would not be suited to the type of work they conducted. For example, vehicles that delivered to construction sites or other off-road sites believed that the uneven road surface would interfere with and reduce the benefit of any automatic adjustments. Others believed that manual checks on tyres as part of regular company vehicle safety checks provided sufficient benefit. Some were aware of an additional cost for this type of adaptation, and payback periods detailed on the research stimulus seemed excessive.

*"The kit costs about £50 per truck per trailer, it only saves probably a month, six weeks, eight weeks if that, of tyre wear"*

**Small / teledepth**

### Low rolling resistance tyres

Similar to other adaptations listed above, SMEs did not believe that low rolling resistance tyres provided a significant benefit over and above the type of tyres they currently used in combination with good driver

behaviour. Some who were more aware of this type of tyre and had used them in the past believed that the quality or longevity did not match the type of tyres they currently used or which their business sector required. Others relied on manufacturers or MOT testing to advise on or provide them with the most suitable tyre for their vehicles.

*“More fuel-efficient tyres are sometimes too expensive, we can't necessarily afford them and it's harder to get hold of the fuel-efficient tyres, if you need them you will go for what you can get at the time”*

**Micro / teledepth**

*“I don't think the fuel saving is very much and you can do that by driving more slowly anyway, plus they are probably more expensive to buy, a two-month payback period sounds quite a lot”*

**Micro / teledepth**

*“Tyres need to suit the truck, we have off road vehicles so they're what the manufacturer chooses for that type of vehicle there isn't much room for change, we just keep the tyre pressure up along with maintenance and education it is the best we can do”*

**Micro / teledepth**

*“They're all right for the first few months, and then they wear down, no good. If you've got to change them every two or three months, what's the point?”*

**Micro / F2F depth**

## SRF Optimiser Tool

The SRF Optimiser tool<sup>51</sup> is a free-to-use, web-based tool which calculates greenhouse gas emissions, energy consumption and costs to an operator and models the effects of 29 carbon-reducing measures. The tool supports decision making amongst fleet owners and operators looking to invest in fuel efficient technology and provides a list of possible fuel-saving ideas and their payback periods

There was minimal awareness of the SRF Optimiser tool. Some businesses admitted that using data and technology could be potentially helpful to them when analysing fuel efficiency, energy consumption and operational costs and a free tool could increase understanding of these issues.

*“We have set up something with DAF which tells us our carbon footprint, it comes in every week, our customers requested it, it shows how many miles we have done and our carbon footprint. I'm always open to suggestions though”*

**Small / teledepth**

However, many companies felt that the amount of time and effort required to keep the information up to date, the potential difficulty in understanding how to interpret the data, or their lack of tech-savviness

<sup>51</sup> SRF Optimiser, 2020, The Centre for Sustainable Road Freight <https://bit.ly/32T3RHk>

acted as barriers to take-up. FORS scheme members used the tools provided by their scheme and did not want to use another tool.

*"We are inundated with tools, I know how it works and the principle but it's dangerous to skip between different tools, it can overcomplicate things. Data does help and new technology helps but it is a lot of information"*

**Micro / teledepth**

*"I wouldn't use it, it's more hassle, I already have enough paperwork to do...I wouldn't have the time"*

**Micro / teledepth**

*"I can see that for a hundred vehicle operation it would be good, but for a one-man band no - not enough savings to justify it and make it worthwhile, and bearing in mind my age, I'm not very computer savvy so I wouldn't bother"*

**Micro / teledepth**

### 3.2.4 Other types of adaptations mentioned

A couple of SMEs reported using other types of adaptations with mixed success and were reluctant to try others.

*'Scania bought in exhaust gas recirculation which created engine problems...we had to pay more money to fix our engines due to the damage caused'*

**Micro / F2f depth**

*"I spent £600 on a tuning chip but it's difficult to quantify how well it works. And, no two vehicles go out every day with the same loads or weights or at the same times of day"*

**Medium / teledepth**

## 4.3 Using alternative fuels

### 4.3.1 Existing evidence

The proportion of gas HGVs (including gas, gas bi-fuel, petrol/gas and gas-diesel) has remained at 0.1% of HGVs since 1997 while other fuel types (hybrid electric, plug-in hybrid electric, fuel cells, steam etc.) made up less than 0.1% of HGVs in 2019.<sup>52</sup> The DfT's Freight Carbon Review 2017<sup>53</sup> described how the fall in diesel prices had increased the payback period for alternatively fuelled trucks; LoCITY's report 2 from the same year gave electric trucks a payback period of 6-10 years.

For electric vehicles this has not changed; the Centre for Sustainable Road Freight's (CSRF) report from 2019, Decarbonising Road Freight<sup>54</sup>, describes electric vehicles as "too expensive to be feasible" which

<sup>52</sup> Table VEH0503: Licensed heavy goods vehicles by propulsion and fuel type: Great Britain and United Kingdom, 2020, Department for Transport <https://bit.ly/30ORJV8>

<sup>53</sup> Freight Carbon Review 2017, 2017, Department for Transport <https://bit.ly/3bHdRUR>

<sup>54</sup> Decarbonising road freight, 2019, The Centre for Sustainable Road Freight for Government Office for Science <https://bit.ly/3bKczs0>

means that only interventions which are financially acceptable are adopted (up to a three-year payback period).

In contrast, natural gas as a potential fuel for road freight has become more promising. Oxford University's Review of prospects for natural gas as a fuel in road transport<sup>55</sup> outlines how natural gas vehicles could have a 2-4-year payback period. They link this to the government's 2018 extension of the 50% cost differential between diesel and natural gas/biomethane up to 2032. A paper by Imperial College<sup>56</sup>, on the other hand, is more sceptical, arguing that there are no guarantees that the current price or tax regimes will always favour natural gas transport fuels, and as a result, payback periods for HGV drivers may not be as predicted.

### 4.3.2 Qualitative findings

The majority of SMEs were aware of at least one type of alternative fuel, and electric vehicles were mentioned more frequently than others. A few cited the benefits of reducing carbon emissions in the environment and were aware that large supermarkets had incorporated these types of vehicles into their fleets. These factors had prompted some to consider introducing alternative fuel vehicles into their own fleet and had had discussions about costs and / or test-driving vehicles.

However, three key barriers to considering alternative fuels emerged for the majority of SMEs:

- 1) Whilst many agreed about the need to reduce emissions in the haulage industry some were **sceptical about the conceptual long-term benefits of alternative fuels** where they had prior experience of the government's handling of the conversion of vehicles from petrol to diesel. Some operators also doubted the reality of savings gained from adopting these fuels vs the benefits as conveyed to businesses by media reports of government plans.

*"Biofuel ruins engines. It leaves, like, a frogspawn texture material, a substance, that lies on the metal frame of the fuel filter"*

*Small / teledepth*

*"I don't agree with electric vehicles, I don't think they are as clean as people think they are, what will they do with batteries at the end of their life"*

*Small / teledepth*

- 2) **The initial outlay of purchasing an alternative fuel vehicle and ongoing running costs were considered prohibitive** for many small road freight operators<sup>57</sup>. Further, the 2-4-year payback period quoted on the research stimulus was considered too long, especially when businesses claimed to be updating vehicles in their fleet every 3-5 years.<sup>58</sup> Many were also sceptical about whether ongoing fuel costs would reduce in the long term, based on their experience of when

<sup>55</sup> A review of prospects for natural gas as a fuel in road transport, 2019, Oxford University - The Oxford Institute for Energy Studies <https://bit.ly/30R9vqQ>

<sup>56</sup> Can natural gas reduce emissions from transport? Heavy good vehicles and shipping - white paper, 2019, Imperial College London - Sustainable Gas Institute <https://bit.ly/2VWWgDW>

<sup>57</sup> Also observed in: Attitudes Towards New Technology within the UK Freight and Logistics Industry, (forthcoming), Ipsos MORI for DfT

<sup>58</sup> Short-term use of HGVs has increased over the three decades; in 1994, 22% of all HGVs had been registered for less than three years and by 2019 this was up to 29%. Table VEH0507: Licensed heavy goods vehicles at the end of the year by number of years since first registration, Great Britain from 1994; also United Kingdom from 2014. <https://bit.ly/2CUczKC>

diesel was encouraged over petrol. In addition, if transporting heavy loads, businesses perceived that the additional weight of tanks in vehicles could reduce fuel efficiency or vehicle power.<sup>59</sup>

*"Natural gas, no, because it's too expensive. The initial pay-out is too expensive for me personally, it would take me longer than I keep the truck to gain the money back. I don't keep a truck that long. Electric truck, yes, but the distance I do it's not worth it"*

#### Micro / F2F depth

*"We looked at LNG but the outlay didn't work for us and there is no local supplier. We could get biodiesel from Stobart but 20p a litre more and they are 20-30 miles away from us so it doesn't make sense. We could install a pump at our depot but the insurance costs were too high for us when we considered that for diesel so we thought it would be similar for LNG"*

#### Micro / Teledepth

- 3) Some perceived that alternative fuel vehicles could make an impact if companies were transporting in and around cities. However, the majority of SMEs who were transporting long distance believed there would be significant difficulties if attempting to refuel on long journeys because of **the current lack of available refuelling points on the UK Strategic Road Network**<sup>60</sup>

*"We have an electric charging point at the depot but the range to get into London would mean needing to charge up again whilst we're there. We wouldn't be able to charge up vehicles in London because the vehicles are too long for parking spaces, we just can't trust it at the moment"*

#### Micro / Teledepth

It is likely that the majority of SMEs would therefore be late adopters of this type of initiative. Many had limited detailed knowledge about the different types of alternative fuels and a small minority believed, via anecdotal evidence, that alternative fuels may even harm their vehicles. A couple also believed that electric vehicles produce a greater environmental impact at source than using diesel fuel.

*"When all these trucks are up and running, and everyone's got one, when they're about three, four years old, then it would be us who would go and buy one then, we're not going to buy at the beginning, we'd wait. When it's dropped to half the price, yes"*

#### Micro / F2F depth

*"People aren't going to gamble on something new, it needs to become genuinely widespread and available, if you go for a fuel that you can't get hold of you will go out of business. Make it available and I'll use it. We haven't all got yards where we can buy thousands of litres and store it"*

#### Micro / Teledepth

<sup>59</sup> Also observed in: *Attitudes Towards New Technology within the UK Freight and Logistics Industry*, (forthcoming), Ipsos MORI for DfT

<sup>60</sup> *Roads managed by Highways England*, 2020, Highways England <https://bit.ly/330UtRU>

## 5 Using incentives to promote engagement

Three types of incentives that were found in the evidence review were chosen to be explored in the qualitative research.

- **Prizes:** for achieving targets related to saving fuel, adapting vehicle designs, using alternative fuels or eco-driving
- **Financial incentives:** provided by government to enable vehicle purchase or adaptations (e.g. grants, preferential rate loans, tax breaks)
- **Independent accreditation schemes:** are schemes that provide independent validation of fuel savings from a range of retrofit technologies

Of the three types of incentives, financial incentives generated the most interest and offered the most potential to engage SMEs.

### 5.1 Financial incentives

Incentives were perceived positively by the majority of SMEs, as has been observed across the wider freight sector<sup>61</sup>. Indeed, without such an incentive many claimed that making further changes to become more fuel efficient or reduce emissions was unlikely because their profitability was already minimised due to low margins offered in the haulage industry.

There were widespread doubts about the likelihood that SMEs would be eligible for financial incentives. This was generally the case among micro or small companies, especially those who had been in the industry many years, or those who felt generally aggrieved about decisions made by government over a number of years, which were perceived to have had a cumulative negative effect on the haulage industry and their businesses. In particular, these participants felt that they had not been eligible for the same financial incentives provided to larger companies and this was perceived as unfair.

*"It would be nice from government, [some] small benefit, you know, less tax or less something, but we just pay and pay and pay, so always just small companies, absolutely nearly working for free"*

**Micro / teledepth**

*"I'm paying however much in tax, but none of it comes back into the industry, you want us to be professional, give us professional status and give us something to make the industry take a bit of pride in itself, but they don't. Government needs to talk to the dealers and operators and not just the people at the top"*

**Micro / teledepth**

*"They've got to put us before all, and they've got to bring a minimum wage in for a driver as well. If they bring a minimum wage in, they'll get more drivers into the industry"*

**Micro / teledepth**

<sup>61</sup> *Attitudes Towards New Technology within the UK Freight and Logistics Industry*, (forthcoming), Ipsos MORI for DfT

*"Nobody is going to change their lorry just because someone wants him to save on emissions so it will have to be a financial bribe of some sort"*

### **Small / teledepth**

However, a financial incentive resonated with the majority of SMEs who assumed that this would allow businesses to decide how they might want to use the money to help their business. Companies reported that if the terms of a government-provided loan were comparable or better than commercially available loans this could encourage them to apply in order to upgrade their fleet in some way. Favourable terms of a loan for an SME were interpreted as a 0% loan or an extended payback period. It was difficult for companies to gauge the amount of loans required other than by quoting the prices of newest vehicles which were currently considered to be prohibitive.

Companies with older vehicles noted that the benefit of upgrading their vehicles would mean less vehicle 'downtime' and spend on maintenance and their business would be more profitable and competitive, and in addition, more fuel efficient. For some, this benefit also extended to contributing to the reduction of emissions.

*"The older vehicles are, the more you spend on them, and you have more downtime and lose money"*

### **Micro / Teledepth**

Some companies noted that a loan would allow them to retrofit vehicle adaptations. Figures of up to £20,000 were quoted by some SMEs.

Those owning or leasing the newest vehicles noted that they envisaged a loan would allow them to update their vehicles sooner than usual if they desired. As they usually part exchanged their older vehicle the amount of loan required would depend on the age of their current vehicle. One company claimed that they would consider an electric vehicle if a loan were available.

*"If they brought an electric truck out, if I could get the incentive of a low-cost loan, it would make it easier to buy. That's what you're looking at. I mean, you go into all these dealerships now, and you're not getting any discounts, I was thinking of buying my own, actually going out and buying my own truck this year, but when I looked at it, it's £110,000"*

### **Micro / F2F depth**

Grants resonated with those who had benefited from them in the past and one company was aware that grants were available for electric vehicles and claimed that they would enquire more about this type of incentive if SMEs were eligible.

*"The average RHA member runs about five vehicles and traditionally they will use their old vehicle in part exchange for new ones, so a financial incentive from government would enable a new purchase. I would encourage that, the more people we can get into Euro 6 vehicles the better because they are very clean. Loans or tax breaks would be OK"*

### **Small / teledepth**

Tax breaks resonated with a few companies who had larger fleets, but others wanted more information on how this might work for SMEs.



A few businesses who were using the most up to date vehicles suggested that a fair way to ensure they would benefit from a financial incentive would be for the government to provide them with a discount on their fuel bill.

*“A lot of companies give a fuel efficiency bonus to the drivers to encourage them to keep their average efficiency to about nine miles to the gallon, they can get an extra £50 a week”*

**Micro / teledepth**

## 5.2 Prizes

The majority of SMEs believed that any prize offered would have a relatively small monetary value attached and assumed that to win it would involve a lot of time and effort. Some assumed a prize might be associated with emissions saved over mileage covered or over a specified time period. In this way it was difficult to understand how such a prize could be organised so that it was fair to all types of SMEs.

A small minority claimed they might consider a prize if it was recognised by clients or was linked to some sort of increased industry status, similar to the FORS scheme membership (see below). The Road Haulage Association was suggested as a potential organisation to administer such a prize as they were independent.

Cross-sector research has demonstrated that while the majority of SMEs have taken steps to reduce their carbon impact, very few choose to publicise their activities. This report suggested that promoting exemplars of current good practice by SMEs could encourage further engagement in emissions-reducing interventions.<sup>62</sup>

## 5.3 Independent accreditation schemes

Descriptions of several accreditation schemes were shared with SMEs on the research stimulus in order to obtain detailed reactions to each scheme. Overall, independent accreditation schemes were considered a ‘nice to have’ and non-members envisaged being able to share views with other businesses on member forums and to benefit from shared knowledge. The most well-known scheme was the Fleet Operator Recognition Scheme and some SMEs were members.

### 5.3.1 Fleet Operator Recognition Scheme (FORS) (originally set up by Transport for London (TfL))

SMEs were generally aware of this scheme having seen logos or stickers on lorries. However, most were not aware of the detail of the scheme unless they had either enquired about membership or were current or past members.

*“I associate it with rules and regulations, that’s the thing you need to go into London now but it’s too expensive for us to do so we will just not be able to do London jobs any more, and it’s the same cost for any size company”*

<sup>62</sup> *Engaging small and medium-sized enterprises (SMEs) in the low carbon agenda*, 2015, Conway, E., Energy, Sustainability and Society, 5 (1) <https://bit.ly/3jl9NJc>

**Micro / F2F depth**

Several SMEs in this research were members of FORS- either Silver or Gold members. These businesses offered mixed views of the benefits of being a FORS member. The two key benefits cited were the ability to bid for work in London, and the ability to charge clients more when bidding for work.

*"If you take this to your insurance company, it says you drive considerately, you're competent, and your insurance company will look at this and give you a small recognition when you renew"*

**Micro / teledepth**

Current or past members disliked the amount of data that had to be regularly reported to FORS and perceived that the cost of the scheme did not take account of company size.

*"We wouldn't bother with it if we didn't go into London, it's so expensive, and we have to be audited, but the work we get from it is very lucrative"*

**Micro / teledepth**

*"We were members of FORS in the past, it's basically a money-making scheme for TfL, all it does is make more paperwork, we went through all the processes and enrolled in it, but for a one-man band it is so expensive and time consuming, so we pulled out of it"*

**Micro / teledepth**

However, the most recent annual report for FORS suggests that these criticisms have been taken on board, featuring a dedicated section on 'How FORS works for small operators'. This describes how there is reduced administrative burden for those with five vehicles or less by allowing certain policies to be confirmed verbally.<sup>63</sup>

**5.3.2 Logistics Emissions Reduction Scheme (run by the FTA)**

The name or logo of the scheme looked familiar to some but none were aware of the scheme in detail. The name of the scheme communicated its purpose well and this generated interest among some SMEs who focused on emissions reductions rather than fuel efficiency. This lack of familiarity is to be expected as in 2015 SMEs (less than 50 vehicles) only made up 26% of scheme membership.<sup>64</sup> Although SMEs increased to 34% by 2018, scheme members with less than 10 vehicles reduced to nil.<sup>65</sup>

**5.3.3 ECO Stars (A Local Authority sponsored scheme)**

A few businesses believed that they had received some information about this scheme in the post or via email but none had followed it up, although it generated interest amongst a couple of businesses in the qualitative interviews because of the ability to help businesses improve their ratings in terms of reducing emissions, and because it was free to join.

<sup>63</sup> Fleet Operator Recognition Scheme 2019 Review, 2020, <https://bit.ly/32UgXUJ>

<sup>64</sup> Logistics Carbon Review 2017 LCRS Industry Partner, Incorporating the Seventh Annual Report of the Logistics Carbon Reduction Scheme (covering 2005-2015), 2017, <https://bit.ly/3bMwLtf>

<sup>65</sup> Logistics Emissions Review 2019 Incorporating the Ninth Annual Report of the Logistics Emissions Reduction Scheme <https://bit.ly/2TiBNaB>

*“Anything that you can improve on that gives you a star rating, you know where you’re going wrong so that you can audit, you can aim for the next star. Yes, I would be interested in that”*

***Micro / teledpth***

#### **5.3.4 Energy Saving Trust (including the online Freight Portal)**

A few believed they had seen some information about this organisation but were unable to recall any specifics. The detail about the organisation shown in the research stimulus generated interest among a few companies either because of the organisation’s focus on reducing emissions, or because it offered advice on how to reduce operational costs.

## 6 Sourcing advice and support

The evidence review only provided limited details about SME road freight operators' preferred sources of advice and support. In TRL's Freight Collaboration Study, they found that SMEs would collaborate more to reduce emissions if DfT provided official guidance to reduce fears of breaking anti-competition laws. Further to this, they suggested engaging through the Federation of Small Businesses as they already have the contacts, tools and experience of working with SMEs<sup>66</sup>.

### 6.1 Current sources of information, support and guidance

Interest in the wider freight industry varied significantly, though the one piece of information which drivers consistently sought out was keeping up to date with rules and regulations. Several interviewees, particularly those from micro businesses, expressed frustration with having to seek out information and find out through 'word of mouth' rather than having it actively supplied.

*"There are so many things that just keep changing...things that I've been doing for the last twenty years, I say, 'Oh, well, it's this way,' and [my colleague] said, 'No, it's not, it's now this way' but it's not always easy to find this information"*

#### Micro / F2F depth

The most frequently cited source of information was **trade associations**: with the Road Haulage Association (RHA) most popular, followed by the Freight Transport Association (FTA) and, in one instance, the specialist 'abnormal load'<sup>67</sup> Heavy Transport Association (HTA). Though most of these interviewees were members of these associations, in a few cases non-members described subscribing to their social media streams to access their free articles and seminars.

This split between micro businesses being dependent upon word of mouth and small-medium businesses being more dependent on trade associations matches findings from other research; a report on government communications regarding Brexit regulations found that haulage managers were 'heavily reliant' on the RHA/FTA while the hauliers themselves depended on 'the grapevine'.<sup>68</sup>

**Trade magazines** were often mentioned, with *Commercial Motor* singled out specifically as a publication that interviewees would pick up and read at their offices or at a truck stop.

Several SMEs spoke about receiving **email bulletins from the DVSA** (or 'VOSA', despite its being dissolved in 2014<sup>69</sup>), **the Traffic Commissioner**, and in some cases spoke about their *Moving On* blog<sup>70</sup>. They described these channels as useful for finding out about law changes or new emissions zones being introduced across the country.

In some cases, interviewees referred more ambiguously to finding information through 'the internet' or 'on social media'. However, one particular website was singled out, *Truck Net UK*<sup>71</sup>, a forum 'by drivers,

<sup>66</sup> *Freight Industry Collaboration Study*, 2017, TRL for the Department for Transport, <https://bit.ly/3cH33aF>

<sup>67</sup> <http://www.heavytransportassociation.org.uk/>

<sup>68</sup> *EU Exit Research: Driving in the EU – hauliers, coach drivers and haulier management*, 2018, Britain Thinks for DfT (unpublished)

<sup>69</sup> <https://www.gov.uk/government/organisations/vehicle-and-operator-services-agency>

<sup>70</sup> <https://movingon.blog.gov.uk/>

<sup>71</sup> <http://www.trucknetuk.com/>

for drivers', which interviewees described as a useful online proxy for sharing information 'word of mouth'.

*"There are a lot of truck forums in which people talk about what they have had fitted and how good it's been for them."*

### Micro / Teledepth

Some interviewees referred to London-specific sources of information such as email newsletters from Transport for London and through the Fleet Operator Recognition Scheme.

## 6.2 Potential future sources of information, support and guidance

SMEs were asked to rank different sources of information, support and guidance by trustworthiness. Despite some feelings of mistrust, interviewees ranked central government information as the most trustworthy, followed by trade associations (despite the conflicting views of members and non-members) and finally the automotive and fuel industry who most of the interviewees believed would be driven primarily by their own business interests.

### 6.2.1 Reactions to DfT providing information, support and guidance

Businesses were generally positive about receiving information from central government, as they felt that they were receiving information 'straight from the source'. Previous research also found that hauliers perceive government issued information as 'the most trustworthy and definitive', with both haulage managers and hauliers signposting to government sources.<sup>72</sup> As mentioned above (5.1), several already reported receiving bulletins from the DVSA or the traffic commissioner. This, along with a certain level of confusion when asking this question, emphasises the fact that SMEs were more aware of DfT's executive agencies and tribunals than the central government department itself.

*"The Traffic commissioner should be involved and his office, they can make or break companies, they recognise the restraints and difficulties...I wouldn't listen to DfT themselves"*

### Micro / Teledepth

The free advice from central government was seen by some, particularly micro businesses, as more beneficial than information contingent on paying a membership fee to an association.

*"Most [trade associations], all they want is your money and they're a waste of space... It's easier to get in touch with the government and it doesn't cost you anything. Every two or three months I'll download the rules. If they haven't changed, I'll throw them away"*

### Micro / F2F depth

However, some perceived government policy on road freight as draconian and skewed in favour of larger operators who have more time to adapt to new regulations and more money to pay on taxes and charges. In many cases, there was an acceptance that rules and regulations were needed, but they desired additional information, support and guidance from central government in order to successfully follow them and avoid financial hardship.

<sup>72</sup> EU Exit Research: Driving in the EU – hauliers, coach drivers and haulier management, 2018, Britain Thinks for DfT (unpublished)

*"We need guidance like everybody else, rather than just being taxed at every turn and fined for everything."*

**Small / Teledepth**

*"I think the government are very out of touch with things when they say, 'We're going to stop diesel trucks going into London. We're going to stop this. We're going to stop that. We're going to have all electric trucks.' They've no idea how much the cost of all this has on the businesses really"*

**Micro / F2F depth**

Similarly, interviewees desired a more reciprocal relationship with government in which SME road freight operators are recognised positively for their professionalism.

*"I'm paying however much in tax, but none of it comes back into the industry, you want us to be professional, give us professional status and give us something to make the industry take a bit of pride in itself, but they don't"*

**Micro / Teledepth**

### 6.2.2 Reactions to freight trade associations providing information, support and guidance

Some believed trade associations would be best placed for messaging because they 'understand the industry' better than central government, with knowledge on the right style and channels to reach freight operators. This attitude has also been observed in cross-sector research on SMEs.<sup>73</sup> As described above (5.2.1), some believed that the government was antagonistic towards the road freight sector; members of trade associations saw them as standing up for their interests to ensure that new rules and regulations were fair for them.

*"[DfT] are the police and the RHA are the solicitors if you're wanting to put them into categories"*

**Small/ Teledepth**

However, some, particularly non-member micro businesses, spoke negatively about trade associations (as mentioned above, this trend has been found in other research<sup>74</sup>). Their perception was that they cannot afford membership fees with such tight profit margins and that they provide poor value for money, duplicating information already provided by central government.

In addition, they believed that these associations do not reach out to smaller companies to encourage them to become members or offer any kind of tailored advice which is appropriate for the most time-poor parts of the sector. Although detailed membership data on these associations is not available to prove or disprove this, the FTA's website does confirm that 50% of their membership operate more than 200,000 lorries in total.<sup>75</sup>

### 6.2.3 Reactions to automotive/fuel industry

Most interviewees ranked the automotive and fuel industries as the least trustworthy, due to a perceived vested interest in selling products rather than providing transparent information.

<sup>73</sup> *Improving communications with SMEs*, 2011, Brook Lyndhurst for DEFRA <https://bit.ly/2ZelpM9>

<sup>74</sup> *EU Exit Research: Driving in the EU – hauliers, coach drivers and haulier management*, 2018, Britain Thinks for DfT (unpublished)

<sup>75</sup> <https://fta.co.uk/about-us>

*"[Manufacturers] tend to manipulate the information they give you so it's what you want to think"*

**Medium/ Teledpth**

However, some micro businesses referred to positive relationships with local dealers. Due to their time poverty, they appreciated having another business take care of reducing emissions and improving fuel efficiency and digesting new government regulations on their behalf. A few interviewees also argued that the automotive and fuel industries' financial incentive could actually work in their favour, that by providing good advice they would be more likely to secure future business.

*"Fuel industry are very good, always very accommodating. They want your business so do what they can to keep you"*

**Micro/ Teledpth**

### 6.3 Channels to promote engagement

With a wide range of demographics and business types, there was no consensus on which channel would be best to engage SMEs.

However, email communication received the highest proportion of support, particularly for micro businesses; interviewees described emails as beneficial as they work with **time poverty**, in the sense of being able to receive them whilst on the move and choosing when to read them. Nevertheless, as has been highlighted in other research<sup>76</sup>, we found that some still preferred printed and posted communications despite widespread digital literacy.

*"I ignore phone calls and post. Email is often preferable. I'll look at an email before deciding whether to ignore it"*

**Micro/ Teledpth**

*"It's really hard to get hold of us. I mean, I get phone calls from people like you all of the time. I'm working. I'm driving. I don't want to talk to you, because it breaks my concentration. Emails are better. I can read them at the weekend"*

**Micro/F2F depth**

In terms of content, interviewees generally preferred short and informative emails focused on updates to rules and regulations, either directly from the DVSA or via the RHA/FTA (see 5.2 above). Most agreed that communications should be concise and clearly relevant so that it does not appear as spam and risk being ignored. This aligns with the findings from research on hauliers' attitudes to government communications on Brexit regulations. Haulage managers desired 'clear', 'firm' and 'confident' messaging while drivers requested 'crisp and concise' communications.<sup>77</sup> Similarly, reports for Defra and

<sup>76</sup> Regarding DfT's Road Freight Surveys, "The research has found little evidence of low digital literacy across this range of users. However, the research has shown that some indicate a preference for paper." 40% use the paper survey, 60% use digital versions (within this, 20% use the smartphone app) *Road Freight Electronic Data – Discovery*, 2019. Lagom Strategy for DfT. <https://bit.ly/2Tqb7r6>

<sup>77</sup> *EU Exit Research: Driving in the EU – hauliers, coach drivers and haulier management*, 2018, Britain Thinks for DfT (unpublished)

the Environment Agency on SMEs in general also recommend that government departments make messaging about pro-environmental behaviour change relevant, realistic and concise.<sup>78 79</sup>

Specifically regarding time-poverty, research on the potential digitisation of DfT's Road Freight Surveys found that the smallest operators find these mandatory surveys to be a 'significant burden' due to a small number of employees covering multiple roles.<sup>80</sup>

Some interviewees desired a more flexible approach to communication; small businesses with a back-office function described preferring a call first, followed by an email, again, to help distinguish important emails from spam; and, another suggestion was to have the function to opt-in to email updates on the topics that most interest SME road freight operators, rather than receiving all emails as standard.

In general, across different suggestions of communication channel, interviewees suggested that DfT should communicate **proactively** rather than waiting for SME road freight operators to find their content independently.

*"At the moment the information is there but people have to go out and find it so [DfT] could be pro-active."*

### Medium/ Teledpth

There was a belief among some interviewees that the government must have their contact details already, and that they should simply send out emails, letters or texts with the most important information. Indeed, DfT's Road Freight Statistics are created via self-completed surveys sent out to all freight operators'.<sup>81</sup> Similarly, some suggested that distributing information through CPC training would be ideal, given that all drivers had to take part in this.

Beyond direct communication, some suggested that DfT representatives attend events (as has been suggested previously<sup>82</sup>) such as trade association conferences, FORS conferences or TruckFest<sup>83</sup>. Other suggestions included advertising in trade press or on the radio, since drivers are often a captive audience for this medium.

*"The radio is a driver's best friend. It's company and a good source of information, traffic and weather."*

### Small/ Teledpth

<sup>78</sup> *Improving communications with SMEs*, 2011, Brook Lyndhurst for DEFRA <https://bit.ly/2ZelpM9>

<sup>79</sup> *Small and Medium-sized Enterprises (SMEs): Understanding and Promoting Pro-Environmental Behaviour Change*, 2009, University of Leeds for the Environment Agency. <https://bit.ly/2AFT9b9>

<sup>80</sup> *Road Freight Electronic Data – Discovery*, 2019. Lagom Strategy for DfT. <https://bit.ly/2Tgb7r6>

<sup>81</sup> *Road Freight Electronic Data – Discovery*, 2019. Lagom Strategy for DfT. <https://bit.ly/2Tgb7r6>

<sup>82</sup> *EU Exit Research: Driving in the EU – hauliers, coach drivers and haulier management*, 2018, Britain Thinks for DfT (unpublished)

<sup>83</sup> <https://www.truckfest.co.uk/>



## 7 Conclusions and recommendations

In this chapter, conclusions are categorised under the research objectives, and recommendations are built around the EAST framework<sup>84</sup>.

### What existing barriers prevent SME road freight operators from adopting emission reduction technologies, practices and behaviours?

Several barriers currently prevent SMEs from engaging with emissions reduction technologies, practices and behaviours. These are:

- **SMEs, and especially micro businesses, are extremely time poor** and this can lead to a lack of focus on issues that are considered to be peripheral to running a business. These include not engaging with communications unless related to compliance issues or prompted by an authoritative or trustworthy channel such as freight trade associations, vehicle dealerships, central government messaging (e.g. DVSA), commercial trade press and word of mouth. For micro businesses the frequency of changes to rules and / or regulations, or significant industry changes such as the introduction of low emission zones can feel overwhelming.
- **SMEs operate on very low margins and are cash poor** and therefore any technologies or practices would need to be affordable and offer quick payback periods. Profit margins for the haulage industry and SMEs in particular are considered low and SMEs spend a lot of their time on business generation and factors that can improve operating costs. Fuel efficiency is considered one of the largest operating costs and SMEs focus heavily on ways to maximise fuel efficiency. One of the biggest influencing factors related to fuel efficiency is considered to be drivers, and ways to influence their driving skills and behaviour. Small and medium sized businesses who often employ transport managers will use formal fuel efficiency analysis to promote 'friendly competition' among drivers and engage them with the opportunity to earn bonuses, which benefits drivers through increased earnings, and businesses through lower fuel costs.
- **Whilst agreeing that the need to reduce emissions is crucial, this topic is less emotive and engaging for owners and drivers.** Although fuel efficiency is linked with reducing emissions, SMEs have focused more on fuel efficiency as a concept when trying to motivate drivers as carbon emissions is seen as less engaging or a less immediate risk than other priorities.
- **There is a general lack of understanding that emissions reduction is more than just having an up to date vehicle.** Many SMEs believe they are already fully compliant with the reduction of emissions agenda because they are using the most up to date vehicles with the lowest emissions. In addition, SMEs believe that by complying with CPC training they are fully up to date on related issues and less likely to seek out new information.

**Recommendations: Make it easy**

<sup>84</sup> EAST: *Four simple ways to apply behavioural insights*, 2014, The Behavioural Insights Team <https://bit.ly/39zRa5E>

- 1) Ensure interventions communicate a demonstrable benefit for SMEs and are as simple and straightforward to implement as possible, for example application processes for financial incentives or communications, to enable SMEs to feel motivated and empowered to engage
- 2) General messaging about initiatives needs to resonate with SMEs needs in terms of: fuel efficiency and minimising costs; improving driver performance; reducing time spent on administration; increasing competitiveness in the marketplace
- 3) Tailor initiatives to take account of company size / ability to fund upgrades or improvements to fleet, and provide achievable payback periods

What incentives would be most effective in getting SME road freight operators to engage with voluntary emission reduction schemes and adopt emission reduction practices / behaviours?

- Of the three initiatives explored in the research, SMEs felt that telematics and eco-driver training offered greater potential to engage as the payback periods of both initiatives were achievable and gains in fuel savings provided by both methods could further improve companies' existing efforts.
- Telematics offered SMEs multiple potential benefits including a way to formally monitor and analyse driver behaviours and improve fuel efficiency more accurately than current methods used. Telematics also offered a more sophisticated, potentially cost effective and less onerous alternative than current driver checking methods, as well as a low ongoing cost, and the ability to retrofit to older vehicles.
- However, there was generally low detailed awareness of the potential benefits of telematics, it would be beneficial to communicate more information to SMEs about how these types of systems could help them improve fuel efficiency and ultimately save them the time and effort of doing this manually.
- In combination with telematics, eco-driver training offered an efficient way to ensure drivers performance was being assessed and encourage long-term improvements in driver behaviour. If this is developed further it will be important to clarify how eco-driver training offers something different and more valuable than other forms of training currently offered, such as CPC training and training offered by vehicle manufacturers or dealers, to motivate uptake among SMEs. Additionally, freight trade associations have reservations on the benefits of the apprenticeship levy and would like more flexibility around the use of levy funding , in comparison to the construction industry which has shown leadership on working with SMEs to embed sustainability.
- Financial incentives generated greater appeal than other types of incentives as these were considered versatile in terms of allowing SMEs to upgrade or update fleets in the most appropriate way for the business and by doing so, improve operating efficiencies, reduce maintenance costs and increase the potential to bid for more lucrative business
- The majority of SMEs believed a preferential rate loan would be the easiest way to do this, with some companies preferring the idea of a tax break or grant if they had past experience of these. A loan or grant would need to enable companies to make the type of changes to fleets that would best benefit the company's needs.

- A key consideration for SMEs was the knowledge that in the past they had felt excluded from other industry incentives and therefore they wanted assurances that they would be able to benefit from the same incentives offered to larger businesses

### Recommendations: Make it attractive

- We recommend that eco driver training courses are tailored to fit the needs of SMEs, for example, offering basic / advanced / specialist courses aimed at new drivers, experienced drivers etc, taking learning from successful approaches from other sectors such as the built environment
- 4) We also recommend that financial incentives are tailored to meet SMEs needs, for example by having a choice of amount that can be applied for, no minimum £ levels, choice of terms etc

### What are the most effective ways of communicating advice to SMEs and simultaneously engaging with them to provide effective feedback?

- It is important to acknowledge that no single means of communication will reach all businesses and therefore a multi-channel approach will be required to reach a wide spread of SMEs.
- The majority of SMEs are time poor and generally pay most attention to messaging and channels that focus on compliance, rules and regulations. They currently use a variety of authoritative and trustworthy providers including DVSA, MOT servicing providers and trusted vehicle dealerships.
- Freight trade association press is also valuable as it offers an objective viewpoint of issues and SMEs believe that the organisation is 'on their side'. Although not all SMEs wholly agree with this last point it is important not to discount this channel.
- Other government-related providers such as CPC training providers could also help to spread messaging around the availability of financial incentives
- Email is the most versatile channel to deliver communications but other channels such as radio advertising and industry events (e.g. Truckfest) offer the ability to deliver messaging widely and to create a positive relationship with SMEs

### Recommendations: Make it social- use existing networks

- 5) We recommend funnelling communications around initiatives and financial incentives through the DVSA and Traffic Commissioner as SMEs trust communications from these organisations
- 6) Working with freight trade associations to provide generic messaging around gratitude and recognition for SMEs support in the haulage industry, and events to create closer relationships with SMEs
- 7) Using a variety of channels to proactively engage SMEs - email can be read anywhere and is quick; radio advertising can be used to communicate a variety of messages to reinforce written comms via other channels; events

- 8) **Make it attractive**: Provide case studies of success stories of how other SMEs have benefited from implementing initiatives (as suggested by other SME research)<sup>85</sup>
- 9) **Make it timely**: Link messaging with key times of the year in which they engage with the industry on a formal basis e.g. MOT servicing / CPC training

What more can the government do to support SME road freight operators seeking to adopt emission reduction technologies, practices and behaviours?

- Telematics and eco-driver training were currently the most viable initiatives but there is an opportunity to educate on the benefits of the more long-term nature of phasing in alternative fuels to increase SMEs knowledge of how these are being developed, to help SMEs plan around how to invest in their long-term future, and to increase the perception of transparency among government
- SMEs do not feel central government fully understands or appreciates their situation and there is an opportunity to convey generic messages that demonstrate government recognises SME constraints and is working with industry (such as upstream suppliers, vehicle manufacturers etc) to help alleviate financial limitations and develop relevant initiatives to support SMEs, including financial support

## Recommendations

- 10) **Make it timely**: Build a more positive relationship by acknowledging DFTs appreciation of SMEs work generally and the important role that they are playing in the current Covid-19 situation.
- 11) **Make it attractive**: Recognise that SMEs are doing the best they can and have a great deal of experience to offer and adopt a constructive approach to any communications that are designed to educate and inform.
- 12) **Make it easy**: In order to facilitate future research, we would also recommend collecting HGV fleet sizes alongside pre-existing mandatory surveys for license holders. This could enable quantitative research that can more accurately highlight differences in strengths of feeling between SME and large road freight operators.

<sup>85</sup> *Engaging small and medium-sized enterprises (SMEs) in the low carbon agenda*, 2015, Conway, E., Energy, Sustainability and Society, 5 (1) <https://bit.ly/3j19NjC>

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## Appendix 2 – discussion guide

<b>2 mins</b>	<b>Introduction and background</b>
	<p>Introduce self, Ipsos MORI, independent research organisation, here to gather your opinions for the Department of Transport</p> <p>We would like to discuss your awareness and understanding of the benefits of improving fuel efficiency and reducing emissions for HGVs.</p> <p><i>EXPLAIN TONE AND NATURE OF DISCUSSION:</i></p> <ul style="list-style-type: none"> <li>• Informal, asking for your opinions</li> <li>• No right or wrong answers</li> <li>• Clarify length of interview - 30 minutes</li> <li>• I will be recording this interview, with your permission, so that we can accurately report of has been said.</li> <li>• All answers will be confidential and anonymous, in line with the MRS code of conduct, and you will not be individually identified in the report; our client (DfT) will not know you took part</li> <li>• Ask for permission to record</li> <li>• GDPR added consent (once recorder is on): Your participation in this research is voluntary. Ipsos MORI would like your consent to record this research. You can withdraw your consent for your data to be used at any point before, during or after the interview. Can I check you are happy to proceed?</li> </ul> <p>Do you have any questions about the research before we start?</p>
<b>3 mins</b>	<b>Participant background</b>
	<ul style="list-style-type: none"> <li>• Please could you tell me your first name and give me a brief background to your company <ul style="list-style-type: none"> <li>○ Prompt on their role, how long they have been running the company, number of employees, size of fleet, types of freight they transport, regions covered</li> </ul> </li> <li>• What are your main responsibilities? <ul style="list-style-type: none"> <li>○ Talk me through what a typical working week involves</li> </ul> </li> <li>• How do you keep up to date about what is happening in the freight industry? <ul style="list-style-type: none"> <li>○ Prompt (if not mentioned) Do you belong to any trade associations, local business forums, etc? If so, which?</li> </ul> </li> <li>• If you were talking to a friend about what is the most important current topic in the freight industry, what would you say?</li> </ul>
<b>3 mins</b>	<b>Current awareness of potential voluntary actions (e.g. vehicle adaptations, training etc.)</b>
	<ul style="list-style-type: none"> <li>• In our research we are interested to understand what people know about improving fuel efficiency and reducing emissions in the freight industry. <ul style="list-style-type: none"> <li>○ What are your thoughts on that topic? Spontaneous, then probe on: <ul style="list-style-type: none"> <li>▪ To what extent do you think it is an important topic for the freight industry?</li> <li>▪ On a scale of 1-10, how important is it for your business to be thinking about this topic? What things contributed to your score</li> </ul> </li> <li>○ What actions are you aware of that a freight business like yours can take to improve fuel efficiency and reduce emissions?</li> <li>○ For anything mentioned spontaneously, ask: <ul style="list-style-type: none"> <li>▪ Tell me what companies like yours can do to contribute to this action? Why do you say that?</li> <li>▪ What might be the benefits for your company of taking this action?</li> </ul> </li> </ul> </li> </ul>



	<ul style="list-style-type: none"> <li>▪ What might be the disadvantages?</li> </ul>
<b>12 mins</b>	<b>Identification of enablers/barriers for using/not using ways of reducing costs/emissions</b>
	<p>Show initial slide with all of emission reduction interventions and ask if they are aware of any of them. If they are aware, ask:</p> <ul style="list-style-type: none"> <li>• What do you know about these topics?</li> <li>• Have you taken any of these actions? Why/ why not?</li> </ul> <p>I'd now like to show you some more information about ways that freight companies can get more involved in reducing their fleet's emissions and ask for your views.</p> <p>Show stimulus for each of the following in turn (rotate order across interviews):</p> <ul style="list-style-type: none"> <li>• Vehicle adaptations</li> <li>• Alternative fuels</li> <li>• Eco-driver training</li> </ul> <p>Probe:</p> <ul style="list-style-type: none"> <li>• Spontaneous view of the action</li> <li>• What do they like about the idea? Why?</li> <li>• What do they dislike about the idea? Why?</li> <li>• Extent to which this seems a viable option for their company? What are they basing their view on?</li> </ul> <p>After all ideas shown:</p> <ul style="list-style-type: none"> <li>• Which of the ideas would they like to find out more about? Why?</li> <li>• Of all the ideas shown, which seems the most and least motivating? Why? <ul style="list-style-type: none"> <li>○ Probe if barriers related to lack of interest in topic or other</li> </ul> </li> <li>• Of all the ideas shown, which ideas do you think your company would be most / least able to introduce? Why? <ul style="list-style-type: none"> <li>○ Probe if barriers related to cost or other</li> </ul> </li> </ul>
<b>9 mins</b>	<b>Enablers/barriers to sourcing and using advice and support on ways of reducing costs/emissions</b>
	<ul style="list-style-type: none"> <li>• Do you have any trade memberships or accreditations? If so, what are they?</li> </ul> <p>I'd now like to show you some ideas that might encourage you to get more involved in fuel efficiency and reducing emissions</p> <ul style="list-style-type: none"> <li>• Show slide for incentives and ask extent to which incentives would motivate their greater involvement? Which incentives are most / least motivating and why? <ul style="list-style-type: none"> <li>○ In groups only: rank in order of preference</li> </ul> </li> <li>• Show slide with examples and ask if they have heard of any of these? which of these they might use? Which are most / least motivating and why? <ul style="list-style-type: none"> <li>○ In groups only: explore awareness and usage of Energy Saving Trust. For those who have used, explore perceptions of content and tone of site</li> </ul> </li> <li>• What is the best way for small road freight businesses like yours to find out more information? Why? <ul style="list-style-type: none"> <li>○ How would you rank the following from most trustworthy to least trustworthy as a source of information on fuel efficiency? Why? <ul style="list-style-type: none"> <li>▪ Central government/DfT</li> <li>▪ Freight membership bodies</li> <li>▪ Automotive/fuel industry</li> <li>▪ Other?</li> </ul> </li> </ul> </li> </ul> <p>To what extent do you think DfT are a good organisation to promote this topic among small businesses? Why/why not?</p>

	<p>If you were DfT and you were trying to raise awareness of this topic among small road freight businesses like yours, which channels would you recommend they use to communicate with small businesses? Why?</p> <ul style="list-style-type: none"> <li>• Spontaneous then probe: email, social media, face-to-face, post, local or national channels, business forums, other?</li> <li>• In what ways could DfT best support you to enable you to make changes to allow your business to better align with this topic?</li> </ul>
<b>1 min</b>	<b>Wrap up</b>
	<p>We are coming to the end of our session now, thanks for all of your opinions and views during this conversation. Do you have anything else that you would like to add?</p> <p><i>THANK AND CLOSE</i></p> <p>Pay incentive</p>

## Appendix 3 – stimulus materials

### Ways for small businesses to reduce their emissions



Adapting vehicles



Using alternative fuels

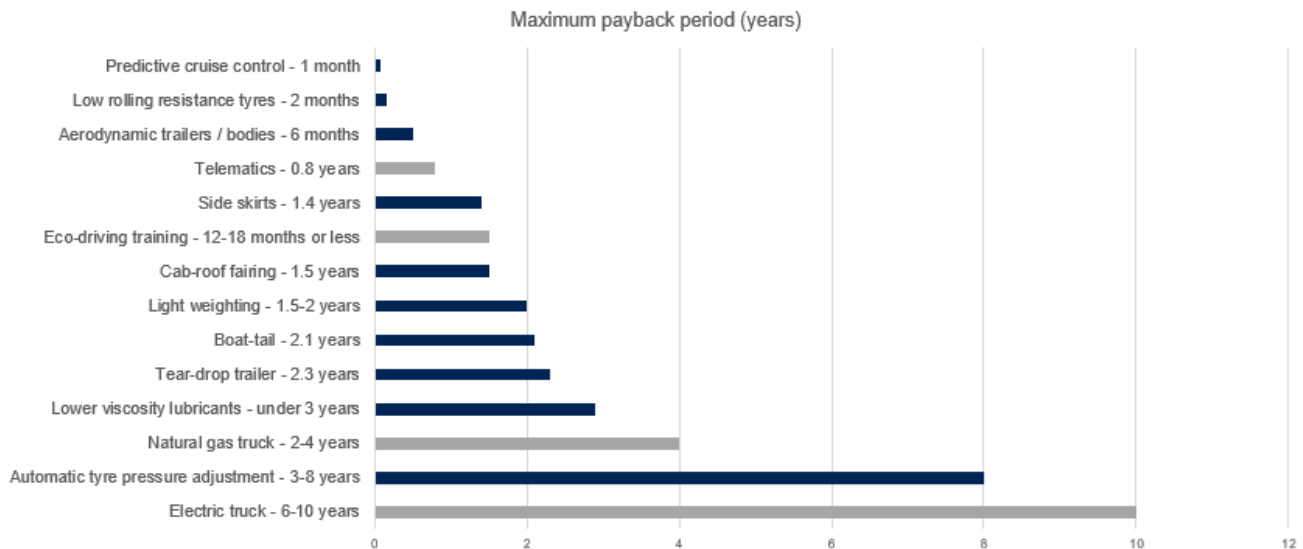


Eco-driver training



## Vehicle adaptations

# Vehicle adaptations



## Aerodynamics

Tests have shown a 7-13% reduction in fuel consumption at highway speeds when aerodynamics packages are used which can be achieved in an **estimated payback period of 2 years**.

### Vehicle adaptations include:

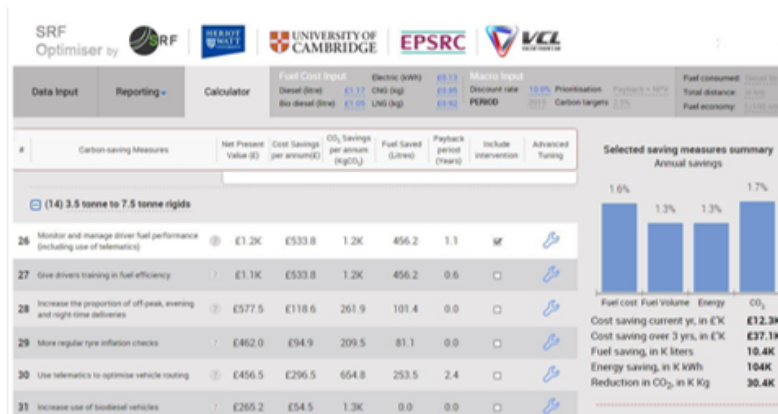
- **Cab features** (roof deflectors, roof fairings, cab side-edge fairings and cab collars) smooth aerodynamic airflow by minimising the gap between the cab and trailer to reduce total air drag.
- **Chassis features** (filler panels and trailer side panels) can save fuel by limiting the interaction of the airflow along the vehicle side with the vehicle chassis.
- **Aerodynamic trailers** are designed to follow a teardrop shape rising up from a standard 4m height of cab to a max of 4.5m and then reducing to the rear. The design can also feature full side skirts to help minimise aerodynamic drag.
- **Add-on front fairings and gap seals**, can be added to trailers and containers to help reduce the aerodynamic drag.

# Other vehicle adaptations

- **Low ‘rolling resistance’ tyres** are tyres designed for fuel efficiency, engineered to provide minimum rolling resistance, with best results achieved when used for motorway and long-distance transport. Increases in efficiency could translate into fuel savings of up to 1.9 litres of fuel per 100km, partly because long haul will include less harsh braking, acceleration and large steering inputs
- **Lower viscosity lubricants:** on fleet tests in the EU, CO2 emissions of buses were halved and fuel consumption reduced from 1-4%, after 30,000km
- Automatic tyre pressure adjustment

# SRF Optimiser tool

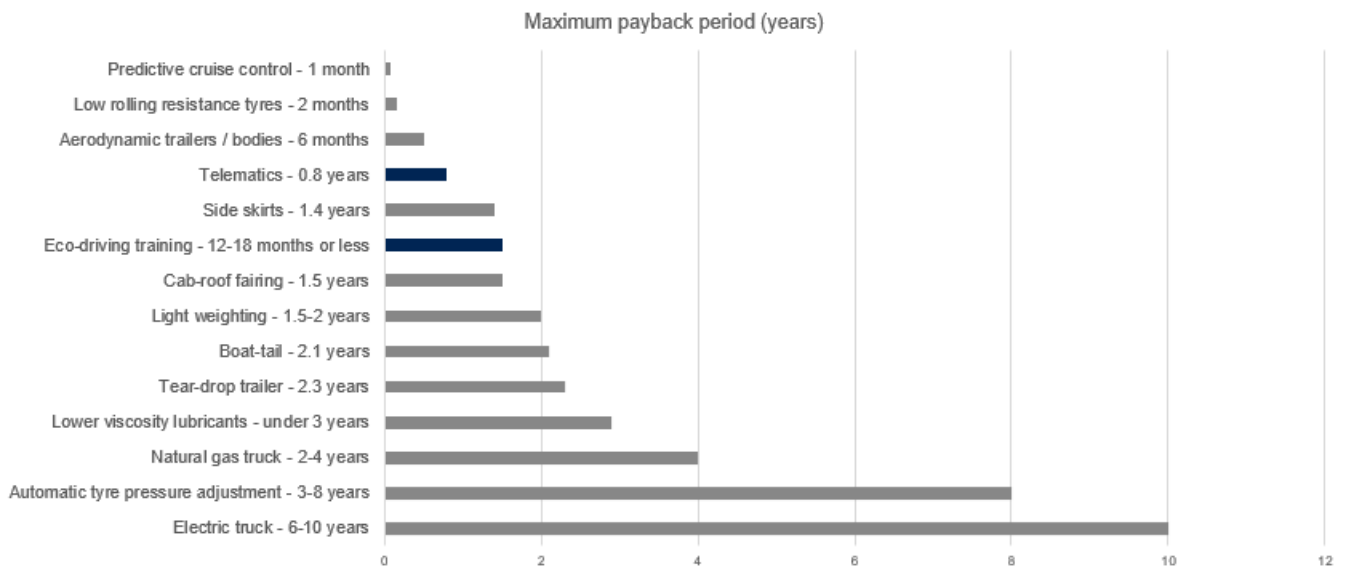
A free-to-use, web-based tool which calculates GHG emissions, energy consumption and costs to an operator of 29 carbon-reducing measures. The tool supports decision making amongst fleet owners and operators looking to invest in fuel efficient technology. The tool provides a list of possible fuel-saving ideas and their payback periods.





# Eco-driver training

## Eco-driver training



# Eco-driver training

Efficient driving techniques and in-cab monitoring technologies can deliver significant fuel savings and a corresponding reduction in GHG emissions from HGVs with **an average payback period of 12-18 months or less**. This could involve attending a **driver training course** every few years or a **pamphlet** to distribute to drivers.

## Benefits for drivers:

- Drivers can develop skills that promote their safety and that of their vehicle / load / other road users
- Reduced stress levels, increased confidence in vehicle control and driving performance, and greater satisfaction for drivers

## Benefits for company owners

- Fuel savings of anywhere between 2-12%
- Reduced CO2 and other harmful vehicle emissions
- Potential tax breaks for companies where drivers undertake driver training / monitoring including subsidised training courses

# Telematics

Telematics are systems that integrate telecommunications and information which help to monitor and improve the efficiency of transport. They can be used in the cab and features can include measuring and monitoring location, speed, acceleration, shifting, idling and mpg in real time.

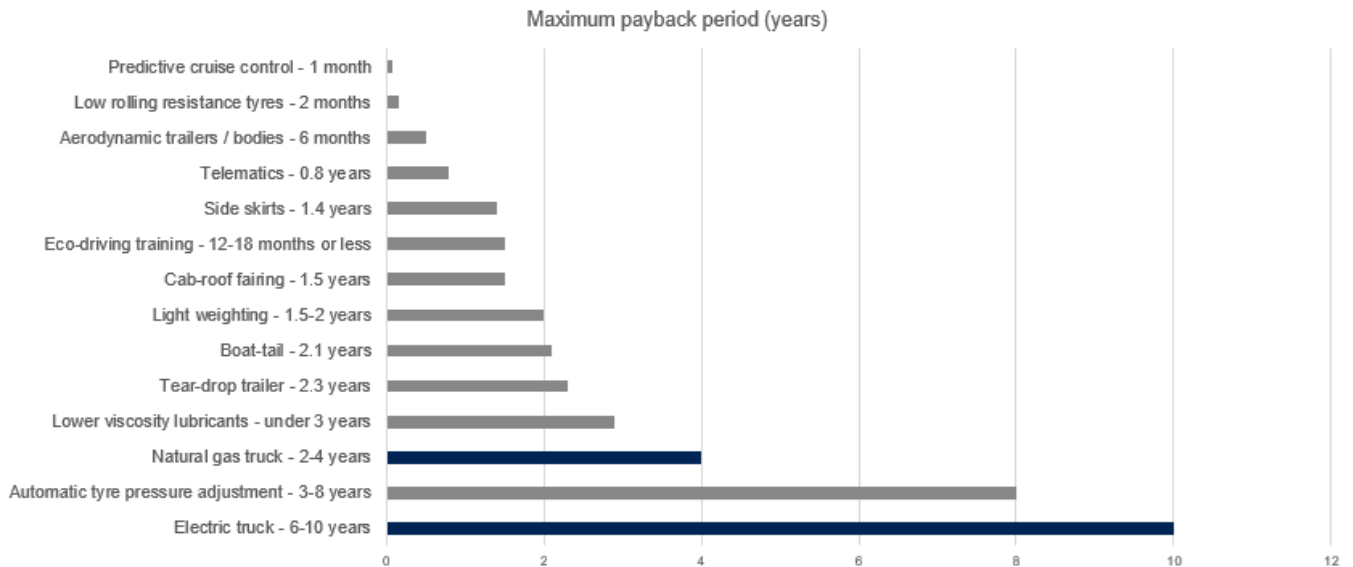
## Potential benefits for the driver and company

- Improved fuel efficiency, reducing overall company expenditure by up to 30%
- Reduced carbon emissions
- Can be retro-fitted to vehicles
- Can be paid for by a monthly fee (£10-25pm)



# Alternative fuels

## Alternative fuels





# Alternative fuels

The gas HGV market is developing and a number of leading businesses are already running trucks on natural gas. **Natural gas vehicles could have a 2-4 year payback period.**

- Methane attracts **lower fuel duties than diesel** and offers the potential for lower greenhouse gas (GHG) emissions.
- Liquid Natural Gas can extend vehicle range and **reduce refuelling frequency**
- Biomethane is completely interchangeable with natural gas in a vehicle. Research indicates GHG **emissions savings of between 60% and 90%**
- Bio LPG could have **@70% CO2 saving compared with fossil LPG**

## Example: Waitrose

**For dual fuel LPG , Waitrose have recouped their costs on biomethane trucks within 3 years**

**Vehicle:** 36t 4x2 Artic truck with **Annual mileage:** 110,000miles

**Working pattern:** Daily deliveries into regional distribution centres

### Whole Life Cost (WLC) Results

**Diesel truck** costs the operator nearly £600,000 over 7 years.

**CNG truck** allows a WLC saving of £80,000, assuming a large capacity grid connected station supplying CNG at 70p/kg. Savings for CNG trucks would increase for higher mileage or longer ownership periods.

**Liquid Natural Gas truck** allows a WLC saving of £40,000, assuming a large capacity station supplying LNG at 75p/kg. Savings for LNG trucks would also increase for higher mileage or longer ownership periods. Using LNG would mean the operator only has to refuel once a day, as opposed to CNG use where the operator may need to refuel twice a day – depending on truck supplier and tank options.

**Dual Fuel LPG trucks** allow around £8,000 WLC saving and retain the ability to run on diesel if travelling beyond the LPG tank range. In this scenario the operator has a large capacity LPG tank supplying a fleet of trucks with LPG at 35p/litre.

**Biodiesel (B20)** trucks could be operated at a similar cost to the diesel truck.





# Incentives and communication

## Incentives for SMEs



- **Prizes:** for achieving targets related to saving fuel, adapting vehicle designs, using alternative fuels or for eco-driving



- **Financial incentives:** provided by government, to enable vehicle purchase or adaptations (e.g. grants, preferential rate loans, tax breaks)



- **Independent accreditation scheme:** are schemes that provide **independent validation** of fuel savings from a range of retrofit technologies

# Examples



**energy**  
saving  
trust

- **Logistics Carbon Reduction Scheme** enables freight operators to report their current emissions and identify means of reducing them.
- **Fleet Operator Recognition Scheme** help businesses focus on best practice opportunities to improve fuel consumption and reduce their environmental impacts.
- **ECO Stars Fleet Recognition Scheme** is a free scheme that aims to help fleet operators improve efficiency, reduce fuel consumption and emissions and make cost savings. When you join the scheme you are awarded a star rating and given advice tailored to your company on how to improve the efficiency of your fleet
- **The Energy Saving Trust** provides a number of services to operators to help fleets save energy, reduce operating costs, reduce CO2 and air pollution emissions, and improve road safety.

# Ipsos MORI's standards and accreditations

Ipsos MORI's standards and accreditations provide our clients with the peace of mind that they can always depend on us to deliver reliable, sustainable findings. Our focus on quality and continuous improvement means we have embedded a 'right first time' approach throughout our organisation.



## ISO 20252

This is the international market research specific standard that supersedes BS 7911/MRQSA and incorporates IQCS (Interviewer Quality Control Scheme). It covers the five stages of a Market Research project. Ipsos MORI was the first company in the world to gain this accreditation.



## ISO 27001

This is the international standard for information security designed to ensure the selection of adequate and proportionate security controls. Ipsos MORI was the first research company in the UK to be awarded this in August 2008.



## ISO 9001

This is the international general company standard with a focus on continual improvement through quality management systems. In 1994, we became one of the early adopters of the ISO 9001 business standard.



## Market Research Society (MRS) Company Partnership

By being an MRS Company Partner, Ipsos MORI endorses and supports the core MRS brand values of professionalism, research excellence and business effectiveness, and commits to comply with the MRS Code of Conduct throughout the organisation.

## Data Protection Act 2018

Ipsos MORI is required to comply with the Data Protection Act 2018. It covers the processing of personal data and the protection of privacy.

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