

# Cleaning the Air – Briefing for local authorities on the best approach to maximising air quality gains

## FTA advisory document

- The benefits of Clean Air Zones (CAZs) will be short-lived. The Euro VI/6 vehicles required will enter the vehicle fleet of their own accord as part of the natural fleet replacement cycle.
- CAZs are not cheap for local authorities to implement. Instead, we believe the money could be better invested in measures that will enable those who can to make changes to their fleet or operations rather than penalising those with the least means to buy replacement vehicles. Additionally, the benefits from these measures will last far beyond the time-limited ones a CAZ may provide.
- In some locations, use of a CAZ will be unavoidable due to required legal compliance with European Union (EU) targets. However, there are approaches to CAZs that can at least minimise the impact on local businesses, without negating the temporary air quality benefit they are supposed to have.

## About FTA

The Freight Transport Association (FTA) is one of Britain's largest trade associations, and uniquely provides a voice for the entirety of the UK's logistics sector. Its role, on behalf of over 17,000 members, is to enhance the safety, efficiency and sustainability of freight movement across the supply chain, regardless of transport mode. FTA members operate over 200,000 goods vehicles – almost half the UK fleet – and some one million liveried vans. In addition, they consign over 90 per cent of the freight moved by rail and over 70 per cent of sea and air freight.

FTA's mission is to make logistics safer, cleaner and more efficient. We seek to ensure that our members can supply our towns and cities with the goods they require every day, whilst reducing any social impacts – including air pollution. As information about the health impacts of some atmospheric pollutants has grown, the issue of lowering local air quality emissions has risen in its importance. The logistics industry accepts that emissions need to reduce compared to their historic levels.

## Role of commercial vehicles in urban areas

Lorries and vans play an indispensable role in servicing our towns and cities. Every commodity we need is delivered by the freight industry, playing a crucial role in supplying local communities and supporting local economies.

For example, a city with a population of 1,000,000 would have almost 45,000 tonnes of goods delivered by lorries on average each day. That equates to 1,874 tonnes picked up or dropped off

every hour. Likewise, a town with a population of 100,000 would have around 4,500 tonnes of goods delivered by lorries per day and 187 tonnes per hour. And as this figure excludes vans, it is only a part of what freight does.

There are social impacts from vans and lorries, in terms of road safety and emissions, but there are massive social benefits too: keeping costs down, enabling local businesses to function and ensuring residents and visitors get the goods and services they desire. Therefore, it is important that in seeking improvements to road safety and emissions there is also recognition that the logistics industry is already one of the most highly regulated sectors and continuing to heap further restrictions onto operators may result in undesirable outcomes, such as business failures and higher costs.

Everything we use and consume has been delivered by the freight industry. From the bricks and concrete used to build our homes, to the coffee and milk for our morning cuppa from the local café on the way to work. Logistics delivers urgent medical supplies for our hospitals; food to shops, restaurants and pubs; stationery and office equipment; fuel for our cars; our clothes and shoes; raw materials and parts to keep factory production lines rolling; and waste vehicles to take away our rubbish and recycling. From the smallest widget to huge construction projects, lorries and vans will have been involved throughout the supply chain from producer to customer.

## Air quality and freight

As information about the health impacts of some atmospheric pollutants has grown, the issue of lowering local air quality emissions has risen in importance. The logistics industry

understands that emissions need to reduce when compared to their historic levels.

We welcome (and would like to draw attention to) the progress that has been made in making new diesel vehicles significantly cleaner than their recent predecessors and look forward to the substantial improvement in air quality this will bring. We accept that further public policy measures are required if the UK is to meet its legal obligations for nitrogen dioxide levels in the worst polluted spots around the UK.

As the Government notes in its Air Quality Plan, air quality is improving. Too often the public is misled into believing the UK's air quality is getting worse when it is not. The public policy challenge before us is how to accelerate the positive change that is coming anyway; this is the correct context in which to judge potential actions.

We also particularly welcome the acknowledgement by Government of the success of the Euro VI standard for heavy duty vehicles. Whilst there are continuing concerns over the performance of Euro 6 cars, we must not allow these issues to obscure the successes of the Euro VI requirement – with up to 90% on-road reductions in local pollutants. This fact should be retained during all policy formulation – the pollution footprint of heavy goods vehicles (HGVs) in cities is set to fall radically in the next few years without any further intervention.

## The limitations and costs of CAZs

CAZs are not necessary to deliver improved air quality, nor do they provide an ongoing air quality benefit. They do not set new standards, but simply aim to accelerate the vehicle change that is coming anyway.

The benefits of CAZs will be short-lived. The Euro VI/6 vehicles required will enter the vehicle fleet of their own accord as part of the natural fleet replacement cycle. Euro VI has been mandatory in all new trucks since the beginning of 2014; at the start of 2021, FTA estimates, based on historic fleet turnover patterns, more than half of the UK truck fleet will be Euro VI. Euro 6 was introduced for new vans more recently (in September 2016) but already around one third of vans will be Euro 6 by 2021 as well. These compliant vehicles will make up higher proportions of urban journeys than this indicates, as it is the younger vehicles that do the high mileage, hence the need for newer, more reliable/capable vehicles. Older vehicles are more frequently used by low mileage operators, albeit ones that may still need access every day.<sup>[NC1]</sup>

CAZs are also disruptive to local businesses. They have the hardest impact on those with the least means to replace vehicles, such as small businesses and operators of specialist vehicles – including many local authority-operated vehicles. When businesses buy new vehicles, it is not just the purchase price they need to consider but how long they plan to run the vehicles for and what they will sell for when the business is finished with them. The introduction of CAZs means the timeframe in which many businesses had planned to sweat their assets has reduced and the residual values of their Euro V/5 vehicles have plummeted. Therefore, not only do businesses need to obtain financial resources for new vehicles sooner than they had planned, they have the additional blow of losing the financial resale value of the vehicles they are replacing. Many businesses will also be locked into lease agreements that may run beyond the start of the CAZ which will be extremely expensive, if not impossible, to get out of.

FTA believes alternative approaches, rather than CAZs, could deliver ongoing long-term benefits to urban areas – not just in air

quality, but in greenhouse gas emissions, safety and efficiency. FTA urges councils to prioritise these changes.

## The alternatives to CAZs

FTA understands that many towns and cities have been mandated by Government to consider a CAZ, but we would urge authorities to first contemplate the alternatives suggested below. CAZs are not cheap to implement, with the need to install a camera network, signage, and set up a back-office system to run the scheme. Instead, we believe the money could be better invested in measures that will enable those who can to make changes to their fleet or operations rather than penalising those with the least means to buy replacement vehicles. Additionally, the benefits from these measures will last far beyond the time-limited ones a CAZ may provide.

### Incentivise the uptake of alternatively fuelled and electric commercial vehicles

#### Vans

Industry is investing in electric vehicles (EVs). It is not, however, as simple as replacing a diesel van with an electric one. Significantly higher purchase costs, uncertainty over residual values, range, vehicle availability, charging infrastructure, as well as land in the right place for micro-consolidation and cross-docking, are all issues that need to be addressed. Local authorities can help by:

- Identifying suitable land in the right strategic location for micro-consolidation and cross-docking from HGVs to electric vans, and protect existing logistics land from redevelopment for other uses such as housing, especially where it is adjacent to the strategic road network.
- Supporting planning applications for EV micro-consolidation centres.
- Working with electricity suppliers to ensure there is sufficient grid capacity to support charging infrastructure development.
- Encouraging local colleges to offer training courses in vehicle mechanics, to be able to service alternatively fuelled vehicles including EVs.
- Ensuring all on-street charging points are accessible to everyone and not restricted to private vehicles in residential streets.
- Offering electric vans discounts or exemptions for local authority car parks and roads with existing commercial vehicle restrictions.

#### Lorries

In the short- to medium-term, wholly electric will not be a mass-market solution for HGVs. In its Road to Zero strategy, the Government committed to work with industry and vehicle manufacturers to develop a definition of an Ultra-Low Emission Truck (ULET). This work is underway, and we expect to have a definition by the end of 2019/beginning of 2020. This could, for example, include alternatively fuelled vehicles that are lower-emission all of the time, or electric-hybrid which can be geo-fenced in urban environments, meaning they will have zero tail-pipe emissions whilst operating in those areas. Towns and cities should anticipate and tailor policy to promote these vehicles. Local authorities can help by:

- Providing beneficial access for ULETS
- Supporting planning applications for alternative-fuel fuelling stations

- Revising any existing large vehicle restrictions in residential areas to allow access for ULETs during the evening and at night.
- Setting up forums for regular engagement with the logistics industry, to develop effective dialogue about industry development as well as local authority strategies and plans.

## Congestion management

Our urban centres are becoming more populated and this is putting huge pressure on the transport network as more people need to move around. More people also create more demand for deliveries and servicing activity. As there is limited space in our towns and cities to build new roads, we need to think about how we can use existing infrastructure more intelligently.

Congestion has a direct impact on fuel consumption and emissions. This is not a marginal thing, it is an exponential effect on the environment. According to a leading truck manufacturer, stopping three times per mile and getting back up to 30mph each time triples emissions compared to just cruising at 30mph. Reviewing road layouts and traffic signals can significantly help reduce congestion, and reducing congestion also means the freight industry can do its job more efficiently, potentially reducing the number of vehicles it needs to deploy.

## Retiming deliveries

Retiming freight activity out of the morning peak to less congested times in the day, or even overnight, can bring huge benefits to the logistics industry as journey times and fuel consumption are reduced and productivity is increased. But the wider environmental and social benefits are potentially even bigger: reduced emissions, leading to improved air quality, and fewer lorries on the road during the school rush and other peak times when there are high numbers of vulnerable road users.

FTA has been championing the benefits of retiming deliveries for many years, but we recognise that, if we are going to use the roads during sensitive hours, we need to do so responsibly and quietly. Therefore, over the last decade or so, we have been working with the Noise Abatement Society on initiatives to promote the use of quiet technology and working practices. FTA recently chaired Transport for London's (TfL's) Retiming Deliveries Consortium which, through a collaborative approach with boroughs and businesses, has promoted and enabled deliveries to be retimed and has overseen the development of tools and guidance to help others retime their deliveries. Whilst there has been a lot of focus on retiming in London, the capital's congestion and air quality challenges are not unique – the tools and guidance that have been developed are transferable to other UK towns and cities. More information can be found on the TfL website.

## Consolidation

Consolidation centres can, in certain circumstances, help reduce the numbers of lorry and van movements. However, they often struggle to be financially independent and often require ongoing public funding. It should also be recognised that a lot of consolidation already takes place in the supply chain, so it is important to ensure those already maximising the efficiency of their operation are not required to split loads via a consolidation centre. Equally, a medium lorry can carry the same capacity as 10 vans and a large lorry the capacity of 25 vans, so we need to ensure we do not replace one large vehicle with many smaller ones.

## Working with customers

Ultimately, the logistics industry delivers what the customer wants, when they want it so, if we are going to change what we do, we also need customers to be willing to change; this includes businesses and consumers alike. Some deliveries are difficult to put through a consolidation centre or retime: newspapers, for example, are the most time-sensitive product of all, and there is no point in delivering sandwiches after lunch – but we might be able to deliver them earlier to avoid the morning peak. It may be possible for some business-to-business deliveries, such as office stationary, paper towels and non-perishable foods, to be made in fewer, larger deliveries, which would reduce vehicle movements, but this would depend on available storage space and cash-flow. Businesses could also consider setting up joint procurement networks with neighbouring businesses, perhaps through Business Improvement Districts. This could not only reduce the amount of vehicle movements but, through economies of scale, they could also get more competitive prices.

Retail has seen a huge shift to online ordering over the last few years and, whilst this is not the main cause of the rise in van traffic (less than 4% of the van parc and 10% of van traffic is related to package and grocery e-commerce deliveries), there are opportunities to signpost and enable more 'click and collect' options, particularly to reduce first-time delivery failures.

## When a CAZ is necessary: How to shape them

In some locations, use of a CAZ will be unavoidable in order to ensure legal compliance with EU targets. However, there are approaches to CAZs that can at least minimise the impact on local businesses, without negating the temporary air quality benefit they are supposed to have.

### Size of zones

CAZs should be kept as small as possible; expanding beyond the city centre will bring a large number of businesses into scope. This makes an exponential difference to freight, as there is a substantial difference between the fleet going into the city centre and those that operate, and are therefore based in, the whole conurbation. Birmingham has utilised a zone far smaller than the whole city council area, and Leeds has reshaped its zone to exclude key logistics locations on the outer areas of the city.

### Charges

The daily charge for HGVs should be set to £50, which is consistent with the Leeds and Birmingham plans, and authorities should work together on a single, nationwide system for the registering and charging of non-compliant vehicles entering the different zones. This would not just reduce the administration costs for national fleets having to register with multiple schemes, it would also mean local authorities can share the development and running costs of the back-office system.

### Sunset clauses

FTA seeks limited sunset clauses for operators based within (or who primarily operate within) the zone who may need more time to meet the requirements, whilst not endangering positive overall progress on air quality. Many businesses will also be locked into lease agreements that may run beyond the start of the CAZ and will be extremely expensive, if not impossible, to get out of. Leeds, for example is offering this to such businesses who have placed an

order for a compliant vehicle or accredited retrofit solution by 31 July 2019. Their sunset period will apply until the order has been delivered or until 31 December 2020, whichever is soonest.

## Grants

The Government's Clean Air Fund provides a mechanism for local authorities to bid for funding to support operators affected by the CAZ. Leeds, for example, has secured £23 million to help businesses based within (or who primarily operate within) their CAZ boundary. Operators of non-compliant HGVs, non-scheduled buses or coaches will be able to apply for up to £16,000 in grant funding which can be used to:

- Purchase a Clean Vehicle Retrofit Accreditation Scheme (CVRAS) accredited retrofit solution from a recognised supplier
- Pay lease agreement exit fees to replace a non-compliant vehicle with a compliant vehicle
- Put towards the cost of purchasing a new or second-hand compliant vehicle

## Exempting Authorised Testing Facilities from zones

HGVs need to undergo regular safety inspections every few weeks as well as their annual test. Vehicles should be provided with an exempt route for accessing key facilities such as Authorised Testing Facilities (ATFs) and testing centres.

## Do not include vans

Vans operators will be the most affected by the introduction of Euro 6 requirements so should not be included unless essential.

The introduction date for Euro 6 vans was September 2016, as opposed to September 2015 for cars and January 2014 for HGVs and buses. Therefore, by the start of 2021, vans older than four and a half years will be non-compliant. This means very few users whose business model relies on using second-hand vehicles will have compliant vans.

Contrary to popular opinion, less than 4% of the van parc and 10% of van traffic is related to package and grocery e-commerce deliveries; the majority of vans in our towns and cities are used for servicing rather than deliveries and will therefore spend much of their time parked up.

## Retrofit

The *Clean Vehicle Retrofit Accreditation Scheme* (CVRAS) is operated by the Energy Saving Trust (EST). There may be companies which claim they can provide a solution, but such devices must be approved by the EST. Whilst there are several accredited retrofit systems for buses to enable their emissions meet the Euro VI standard, it must be noted that, apart from one system which can be used on some refuse collection vehicles, there is currently no accredited retrofit option for HGVs to bring Euro IV or V vehicles up to the Euro VI standard. Due to the technical requirements of Euro VI, if such an option were to be available for HGVs it would likely cost in the region of £15,000 to £20,000 per vehicle and, therefore, would only be potentially viable to operators of specialist high-value vehicles. For operators of 'standard' HGVs, any retrofit device which may be brought to market is unlikely to be cost effective and consequently will not be a compliance option for them. Therefore, for most operators, the only option is to replace the entire vehicle.