HGV Safety Permit Scheme

Final Phase 2C Statutory Consultation Document

One of the Mayor of London’s top priorities is the safety of Londoners. In September 2016 he announced his intention to use the world’s first Direct Vision Standard (DVS) for Heavy Goods Vehicles (HGVs) to reduce collisions involving people walking and cycling.

The third phase (phase 2b) of the DVS consultation was held between 8 January and 18 February 2019. Since then we have further developed the final proposals and listened carefully to stakeholder views. This consultation – Phase 2c – is conducted by TfL on behalf of the Mayor and London Councils.

This consultation document outlines the updated final proposed HGV Safety Permit Scheme for implementation. The DVS forms part of this proposed Scheme. It demonstrates how the Scheme proposals have been developed with consideration given to feedback from the previous three consultations. This consultation document and its appendices provide the final scheme proposals and details of the legal documents for implementing the scheme through a Traffic Regulation Order (TRO), as set out in an “Amendment Order”, and associated documents1. (Further details are provided below.) Objections to the Amendment Order, setting out the grounds on which they are made, and any feedback on the proposals for the Scheme generally, should be made before 23 May 2019.

The proposed Scheme outlined in this document is applicable to HGVs over 12 tonnes (N3 Class) gross vehicle weight (gvw) operating in or entering Greater London. It is proposed Permits will be available on a voluntary basis from October 2019 with enforcement from 26 October 2020.

Definition of terms

Gross vehicle weight (gvw) - The weight of a vehicle or trailer including the maximum load that can be carried safely when it is being used on the road.

Heavy Goods Vehicle (HGV) – HGVs over 12 tonnes gvw covered by the scheme.

Direct Vision Standard (DVS) – The technical standard that has been developed and refined to rate HGVs from zero star (lowest) to five star (highest) based on the amount of visibility a driver has directly through the windows of an HGV cab weighted towards the areas of greatest risk to people walking or cycling.

HGV Safety Permit Scheme or ‘the Scheme’ – The way in which it is proposed to introduce safety standards for HGVs over 12 tonnes gvw entering or operating in Greater London from 2020 with conditions imposed on those with poor direct vision.

Safe system – A set of mitigation measures to improve the overall safety of an HGV where it does not meet the minimum DVS rating required

Traffic Regulation Order (TRO) – The proposed legal mechanism for implementing the Scheme.

1 These are the LLC S and HGV Safety Permit Scheme Policy Statement, the HGV Safety Permit Conditions, Safe System Guidance and Exemptions.
Executive summary

In September 2016, the Mayor announced his intention to use the world's first Direct Vision Standard (DVS) for Heavy Goods Vehicles (HGVs) to improve the safety of all road users, particularly those which are vulnerable, such as people walking, cycling and riding motorbikes.

The DVS forms part of the Mayor's Vision Zero approach to eliminating all deaths and serious injuries from London's roads by 2041. Using a star system, the DVS rates HGVs from zero (lowest) to five (highest) stars, based on how much a driver can see directly through their HGV cab windows taking into account the area of greatest risk to people walking and cycling.

Between 2015 and 2017, HGVs were disproportionately involved in fatal collisions with people cycling (63 per cent) and walking (25 per cent) on London's streets, despite only making up four per cent of the miles driven in the Capital. Restrictions in the HGV driver’s field of vision, or ‘blind spots’ have been identified as a significant contributory factor in collisions, although other factors play their part.

Following three previous phases of consultation, taking stakeholder feedback into consideration and a full Integrated Impact Assessment (IIA), we are proposing to deliver the Mayor's commitment via an HGV Safety Permit Scheme. The proposed Scheme would require HGVs over 12 tonnes to hold a Safety Permit to enter or operate in Greater London from 26 October 2020, unless exempt. Permits will be free of charge. They will be issued automatically, (on application via an online permit portal) to vehicles meeting the minimum direct vision star rating threshold: one star after 26 October 2020 and three stars from 26 October 2024. Vehicles not meeting the minimum star rating threshold, or which have not been rated under the DVS, will need to demonstrate the vehicle will be operated in compliance with a defined safe system to improve its overall safety in relation to people walking and cycling close to the vehicle. These vehicles will be issued Permits with “safe system” conditions requiring the fitting of mitigation measures.

The proposed safe system includes specific industry recognised mitigating measures such as sensors, camera systems and visual warnings. The safe system will evolve over time, and will be consulted on in 2022 in order to consider any advances in technology.

A three step process to obtaining a Permit is proposed:

1. Identify if a vehicle is in scope for the Scheme
2. Obtain a Direct Vision Standard star rating for the vehicle(s)
3. Apply for a Permit via the online application portal

Enforcement of the Scheme would be by Automatic Number Plate Recognition (ANPR) cameras whereby vehicles without a Permit, would be issued a Penalty Charge Notice (PCN). There will be additional on-street and intelligence-lead enforcement.

It is proposed that Permit issuing will commence on a voluntary basis from October 2019 and enforcement of the Scheme by PCN will commence on 26 October 2020.
Section 1 – The consultation process

A phased consultation approach has been taken at key stages of the development of the Scheme proposals to implement the DVS:

Phase 1 (January to April 2017) – we set out the case for HGV driver direct vision and consulted on the outline proposals to introduce a DVS for HGVs in London and the principles of the Standard itself. We considered all of the responses and a full analysis can be found in the Consultation Report² and the Responses to Issues Raised³. The responses showed that, in general, there is support for the principle of a DVS.

Phase 2a – Policy consultation (16 November 2017 to 24 January 2018) – we outlined how we set the proposed DVS star rating boundaries and the process by which different options for implementation were assessed and used to develop the preferred HGV Safety Permit Scheme. We considered all of the responses and a full analysis can be found in the Consultation Report⁴ and the Responses to Issues Raised⁵. The responses showed support for the proposed Permit Scheme approach.

Phase 2b – Further scheme proposals (8 January 2019 to 18 February 2019) – we consulted on further HGV Safety Permit Scheme proposals including the Permit application process, safe system requirements and enforcement of the Scheme. We considered all of the responses and a full analysis can be found in the Consultation Report⁶ and the Responses to Issues Raised⁷. Feedback from this consultation showed overall support for the proposals.

Listening to consultation feedback, we have made some key change and updates to our proposals and taken them forward to the Phase 2c consultation:

- **Safe System** – we have provided clearer guidance on the requirements for the safe system mitigating measures
- **Progressive Safe System** – we have committed to consulting on the progressive safe system in 2022 ahead of its introduction in 2024
- **Driver Training** – we have clarified that driver training, while highly recommended is not a mandatory requirement for obtaining a permit. A list of providers of will be included on the permit application portal
- **HGV Safety Permit** – for HGVs that meet the minimum DVS star rating (one star in 2020,) Permits will be issued automatically once the online application has been completed. During the pre-compliance year (October 2019 –October 2020). All permits will be issued subject to standard conditions but only where the minimum DVS threshold is not met will the safe system conditions apply. Permits for HGVs that are required to fit the safe system will be issued within 28 days following approval of the safe system evidence pack. Once enforcement of the scheme begins in October 2020, the turn-around period will be shortened. Further details on this will

² Appendix 8 – Consultation report (Consultation phase 1)
³ Appendix 9 – Responses to Issues Raised (Consultation phase 1)
⁴ Appendix 10 – Consultation report (Consultation phase 2a)
⁵ Appendix 11 – Responses to Issues Raised (Consultation phase 2a)
⁶ Appendix 12 – Consultation report (Consultation phase 2b)
⁷ Appendix 13 – Response to Issues Raised report (Consultation phase 2b)
be communicated later this year. We have also provided details on the appeals process where a permit application is refused.

- **Enforcement** – we have provided further guidance on the enforcement process for the scheme
- **Appeals Process** – we have provided details on the appeals process regarding any Penalty Charge Notice (PCN) issued under the Scheme

**Phase 2c – Final Scheme proposals and Statutory TRO consultation (this consultation)** – this sets out the final package of proposals for consultation, taking into account the feedback from Phase 2b. It is proposed the Scheme is implemented by a TRO and this consultation includes a statutory consultation on the Amendment Order that does this. Objections to the Amendment Order, setting out the grounds on which they are made, and any feedback on the proposals for the Scheme generally, must be made before **23 May 2019**.

**Section 2 – Background and context**

One of the Mayor of London’s top priorities is the safety of Londoners and he has committed to a Vision Zero plan for no deaths or serious injuries on London’s road network by 2041. This sets a radical new direction for transport in London and will require all partners in the transport field to adapt.

London has a particular problem with HGV collisions with people walking and cycling, compared with the UK and other cities. Between 2015 and 2017, HGVs were involved in 25 per cent of pedestrian and 63 per cent of cyclist fatalities despite only making up four per cent of the miles driven in London.

Analysis of the UK accident database (STATS19)** shows that poor vision (cited as ‘vehicle blind spot’ or ‘failed to look properly’) is a commonly cited cause of HGV incidents. In London, between 2010 and 2016, 662 cyclist and 331 pedestrian collisions with HGVs (over 3.5t) were attributed to ‘failed to look properly’ or ‘vehicle blind spot’. The case for direct vision is that enhanced direct driver vision is the future in creating safer vehicles and safer urban environments. Not only do people walking and cycling feel safer and more confident in navigating the urban street network when they have established direct eye contact with a HGV driver, drivers themselves, despite initial scepticism, reported greater confidence in seeing a person walking or cycling near their vehicle and thus preventing collisions when driving a cab with greater direct vision.

This is further backed up by a faster reaction time and reduced stopping distance with direct as opposed to reliance on indirect vision devices such as cameras or mirrors.**

Direct vision for HGVs is also gaining increasing traction internationally. On May 17, 2018 the European Commission published its proposals for the Third Mobility Package which included

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**9** NOTE: One collision may contain multiple vehicles and contributory factors, these factors may not necessarily be assigned to the goods vehicle involved

a direct vision requirement for HGVs and buses manufactured in Europe. This was further supported by the European Parliament on 16 April 2019.  

Direct vision is hence a key component in achieving Vision Zero. However, for this change to be implemented effectively will require a certain lead in time; the time required to introduce regulation at European Union level; time for the next generation of cab design to be available on the market; and time for operators’ fleet turn over.

As HGV collisions with people walking and cycling present a significant problem on London’s roads today, we cannot afford to wait for this change to take place. The introduction of a safe system as part of the HGV safety permit scheme serves as a mitigation to enhance vehicle safety on London’s roads today until the more fundamental change of increased direct vision is achieved.

Having a DVS rating for HGVs helps to inform purchasing and leasing decisions for operators, allowing them to choose vehicles which are the most suitable for working in busy built up environments.

A comprehensive approach

Achieving Vision Zero requires all sources of road danger to be considered as part of a wider system. All parts of the system must be strengthened in combination to multiply their effects and road users should still be protected if one part of the system fails.

TfL has a comprehensive road danger reduction programme which is designed to look at all sources of road danger and cyclist and pedestrian safety including road conditions, infrastructure design and behaviour change. This programme is based around the principles of Vision Zero and adopting a safe system approach to eliminate all deaths and serious injuries. The proposed HGV Safety Permit Scheme (incorporating DVS) follows the principles of Vision Zero and a safe system approach.

Section 3 – The final HGV Safety Permit Scheme proposals

Using a star system, the DVS rates HGVs over 12 tonnes from 0 (lowest) to 5 (highest), based on how much a HGV driver can see directly through their cab windows weighted towards the areas of greatest risk with people walking and cycling, as opposed to indirectly through cameras or mirrors.

The DVS forms part of the proposed HGV Safety Permit Scheme. The proposal is to implement a Permit Scheme based on a safe system approach to reducing road risk. It is intended that all HGVs over 12 tonne gvw would require a Permit to enter or operate in Greater London (unless exempt – see Appendix 6). Those without a Permit would be in breach of the Scheme. Permits would be issued automatically to vehicles meeting the

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12 Vision Zero action plan – Taking forward the Mayor’s Transport Strategy
minimum direct vision star rating threshold (following application via the TfL website). The Permits of vehicles not meeting that threshold, or which have not been rated under the DVS, will be granted subject to safe system conditions that legally required the fitting of mitigation measures to improve its overall safety in relation to people walking or cycling in close proximity of the vehicle (see Table 1).

Some specialist HGVs over 12 tonnes gvw are completely outside the scope of the Scheme and do not require a Permit to enter or operate in London. Others vehicles requiring a Permit under the Scheme are exempt from elements of the Safe System requirements, such as fitting sideguards and mirrors, where it is proved impractical or impossible to do so (see Appendix 6 for a list of exemptions).

**Key Scheme dates**

The key dates for the proposed scheme are as follows:

**October 2019:** Permit issuing begins on a voluntary basis (Scheme ‘go-live’) – see Section 4 for the Permit application process.

**26 October 2020**\(^{13}\): Unless exempt, HGVs over 12 tonnes gvw will require a Safety Permit to operate in Greater London; failure to do so will attract a £550 PCN for the operator (a £130 PCN for the driver may apply where considered appropriate).\(^{14}\) Zero star (approximately 29 per cent of the current fleet\(^{15}\)) or un-rated HGVs would be banned unless they can demonstrate they will operate in compliance with safe system mitigating measures. If the HGV meets the safe system requirements, a Permit with conditions would be issued. Zero star or un-rated vehicles not complying with the safe system would be banned. For vehicles rated below three stars, Permits will expire in October 2024.

**2024:** Permits will be issued to vehicles rated three star and above. Zero, one and two star or un-rated HGVs (approximately 72 per cent of the current fleet\(^{16}\)) would be banned unless they can demonstrate compliance with an updated progressive safe system that incorporates new technology available at the time. Responding to stakeholder feedback, the progressive safe system will be subject to further consultation in 2022. New Permits will be issued for these vehicles with progressive safe system conditions attached.\(^{17}\)

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13 26 October 2020 is aligned to the strengthening of the Low Emission Zone where a new Euro VI standard for NOx and PM will be introduced for buses, coaches, HGVs and similar vehicles
14 The amount of the PCN is reduced by 50 per cent if paid within 14 days.
15 Appendix 5 - 2018, AECOM, Heavy Goods Vehicle Survey – P23
16 Appendix 5 - 2018, AECOM, Heavy Goods Vehicle Survey – P23
17 Zero star or un-rated vehicles with an approved safe system will be granted a Permit until 26 October 2024 (when the progressive safe system will be required for vehicles rated two star or below). One and two star
The Scheme will be operational 24 hours a day, seven days a week and will cover the area within Greater London (see Figure 1).

There are two core elements of the HGV Safety Permit Scheme proposals:

1. The Direct Vision Standard and vehicle star ratings
2. The safe system for vehicles not meeting the minimum star rating threshold

The Direct Vision Standard (DVS) and vehicle star ratings

Research shows HGV drivers react quicker and are less likely to be involved in a collision when they can see people walking and cycling directly through cab windows. It also shows that people walking and cycling feel safer in the knowledge that they have made eye contact with a HGV driver\(^{18}\). Increased direct vision from HGV cabs has the potential to save lives as part of a safe system approach to reducing road danger.

The DVS provides a means of objectively measuring and rating the direct view available to a driver from a particular make and model of HGV. There are a number of design features that influence driver direct vision, such as the size and shape of the windows as well as the height of the HGV cab. For any given HGV model, the higher the cab, the worse the level of direct vision will be (Figure 2).

![Limited direct vision model](image1.png) ![Increased direct vision model](image2.png)

**Figure 2:** Example of limited direct vision (zero star) and increased direct vision (five star) rated vehicles

Calculating star DVS star ratings

The DVS measures the 3D volume of space that can be seen directly by the driver from the cab. The greater the volume of that direct visibility, the closer a person can be seen to the vehicle and the more of them that can be seen. The assessment zone concentrates on the area of greatest risk to a person walking or cycling. The volume of space is then linked to ‘real world’ performance. Pedestrians and cyclists are placed around the vehicle in the areas of greatest collision risk and the distance that their head and shoulders can be seen is calculated. This is correlated with the direct visibility volume results showing that the larger the volume the closer pedestrians and cyclists can be seen to the vehicle.

To meet ‘one star’, at least the head and shoulders of 99 per cent of the European adult population must be seen within an ‘acceptable’ distance at the front and side (see Figure 3).

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\(^{18}\) Arup (2016), *Exploring the road safety benefits of Direct vs Indirect vision in HGV cabs*
The ‘acceptable’ distance is 4.5m to the nearside, 2m to the front and 0.6m on the off-side of the cab. The distance is linked to where people become directly visible within the area covered by the existing close proximity mirrors and indirect vision becomes complemented by direct vision.

The two, three, four and five star rating boundaries are set by equally dividing the volume of space between the one star boundary and the current best performing vehicle’s volumetric score.

![Diagram of acceptable distances](image)

**Figure 3:** The ‘acceptable’ distance at the front and side of a HGV by star rating

**Passenger side lower windows**

Passenger side lower door windows can be included in the DVS star rating where approved by the Vehicle Manufacturer (and where the appropriate Computer Aided Design data is available). This has the potential to increase the volume of visible space by approximately 4-9 per cent\(^{19}\). This can translate to approximately 27-36 per cent of the volume between star rating boundaries. However, while a lower door window has the potential to increase an HGV’s star rating, it will not do so in all instances. The ability to increase a star rating will be dependent on the configuration of the HGV and where it lies between the star rating boundaries.

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\(^{19}\) Appendix 1 – 2018, Loughborough Design School, The definition, production and validation of the Direct Vision Standard (DVS) for HGVs
The DVS technical protocol (see Appendix 1) has been developed by Loughborough University and validated, tested and refined with input from the Expert Panel group. This protocol provides the step by step process for vehicle manufacturers (or other approved third parties) to consistently and objectively rate HGV models and apply a specific star rating. Star ratings calculated by vehicle manufacturers will be independently audited and validated.

The safe system (for vehicles not meeting the minimum star rating threshold)

Vehicles not meeting the minimum DVS star rating threshold or unrated vehicles can still be granted a Safety Permit to enter or operate in Greater London as long as they can demonstrate compliance with a safe system.

The safe system is a series of mitigating vehicle safety measures (fitted at or after point of manufacture) designed to reduce the risks HGVs present to people walking and cycling. These measures are summarised in Table 1 and detailed specifications of the proposed requirements are included in Appendix 2 – “HGV Safety Permit – guidance for operators entering London”. Operators should refer to this guidance to ensure their vehicles are equipped with the appropriate safe system measures where they do not meet the minimum DVS star rating threshold.

Note: The equipment acts as a mitigation against zero star rated HGVs. However, fitting these safe system measures does not increase a vehicle’s star ratings as the ratings only relate to a vehicle’s level of direct vision.

The Phase 2a consultation outlined the proposed components of the safe system measures and the principles behind setting, testing and maintaining the system. Following this consultation, a Safe System Advisory Group was set up with representatives from pedestrian and cycling groups, industry trade associations, vehicle manufacturers and government organisations to help expand and inform the detail of these proposals.

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20 Right-hand drive and left-hand drive HGVs can be rated in the same way using the DVS technical protocol.
21 HGVs that pre-date available vehicle manufacturer data (therefore being LEZ non-compliant) and a select number of low volume ranges will be assigned an automatic zero star rating unless data or other evidence is supplied by the operator that the vehicle should be classed as having a higher star rating.
A key recommendation from the group was to carry out independent research\(^{22}\) to provide evidence of the effectiveness of each mitigating component whilst also taking into consideration operational experience and feedback. This research fed into the final proposed specification of the safe system as detailed in Appendix 2. Conditions attached to the Permit will require they are fitted and operated properly.

**Driver training – highly recommended**

The final proposals do not include driver training as a mandatory requirement. Following feedback from the Phase 2b consultation and engagement with stakeholders, the driver training element has been clarified in the guidance for operators document (Appendix 2).

**Note:** Responding to Phase 2b consultation feedback, we have clarified that driver training, whilst highly recommended is not a mandatory requirement for obtaining a Permit. A list of providers of training in safe urban driving will be included on the Permit application portal.

TfL will continue to encourage the highest standards of safe driving in the freight and servicing sector, both through TfL’s own programme of work as set out in TfL’s Freight and Servicing Action Plan and by calling on the Department for Transport to make Safe Urban Driving a compulsory part of the Driver Certificate of Professional Competence.

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<tr>
<th>Area to address</th>
<th>Purpose</th>
<th>Safe system measures required in 2020</th>
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<tr>
<td><strong>Principal requirement</strong></td>
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<tr>
<td><strong>Direct Vision</strong></td>
<td>To ensure a minimum standard of a driver’s direct field of view and reduce the risk of close-proximity blind spot collisions</td>
<td>• Where this rating is one star or above, fleet operators will be able to apply for a Permit with no further mandatory action • Where this rating is zero star, or a vehicle is unrated, the vehicle shall be fitted with safe system mitigating measures</td>
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<td><strong>Safe system mitigating measures</strong></td>
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<td><strong>Indirect vision</strong></td>
<td>To improve visibility for drivers, and reduce the risk of close proximity blind-spot collisions</td>
<td>• Class V mirror shall be fitted to the nearside of the vehicle • Class VI mirror shall be fitted to the front of the vehicle • A fully operational camera monitoring system shall be fitted to the nearside of the vehicle • A sensor system that alerts the driver to the presence of a vulnerable road user shall be fitted to the nearside of the vehicle</td>
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\(^{22}\) Appendix 7 – HGV Safety Permit for London – Evidence of effectiveness and candidate technical requirements for the safe system. Apollo Vehicle Safety, 2018
| Warning of intended manoeuvre | To reduce the risk of close-proximity collisions by alerting vulnerable road users to vehicle hazards | • Audible vehicle manoeuvring warning shall be fitted to audibly warn vulnerable road users when a vehicle is turning left  
• External pictorial stickers and markings shall be displayed on vehicles to warn vulnerable road users of the hazards around the vehicle |
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<td>Minimising physical impact of a hazard</td>
<td>To minimise the probability and severity of under-run collisions with vulnerable road users</td>
<td>• Side under-run protection shall be fitted to both sides of the vehicle except where this is proved impractical or impossible (see Appendix 6 – for exemptions)</td>
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<td>Highly recommended (not mandatory)</td>
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<tr>
<td>Driver training urban driving skills <em>(recommended–not mandatory)</em></td>
<td>To encourage all drivers to have the knowledge, skills and attitude required to recognise, assess, manage and reduce the risks that their vehicle poses to vulnerable road users</td>
<td>• All drivers (including those exempt or not in scope of the Driver Certificate of Professional Competence) should undergo specific training on the safety of vulnerable road users and the use and limitations of supplementary vehicle safety equipment</td>
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Table 1: HGV Safety Permit requirements summary

**Note:** Certain specialist vehicles are exempt from some of the safe system measures, mostly the side-guard requirements (see Appendix 6).

### A progressive safe system – requirements for 2024

From 26 October 2024, the minimum DVS rating increases to three stars so HGVs over 12 tonne gvw rated zero, one or two stars (or un-rated) will be banned from entering London unless they demonstrate compliance with a progressive safe system. This is to ensure any advances and developments in technology are taken into consideration. It is envisaged the key components of the safe system will remain the same and any changes will follow the same principles as the current proposals, including the requirement that all equipment/technology can be retrofitted at a proportionate cost, is supported by evidence of effectiveness and accepted as industry best practice. Conditions attached to the Permit of zero, one or two stars or un-rated vehicles will require they are fitted and operated properly.

**Note:** Responding to Phase 2b consultation feedback, a commitment has been made to hold a full consultation on any changes to the safe system in 2022. This is to allow adequate time for operators and fleet managers to plan their fleets.

**Independent Integrated Impact Assessment (IIA)**
In 2018, as part of the Phase 2a consultation process, we outlined the findings of an independent IIA to consider the wider impacts of the proposed HGV Safety Permit approach compared to an outright ban of zero star rated HGVs over 12 tonnes. The IIA considered the significant likely economic, social and environmental impacts and impacts on equalities, traffic movement and traffic management. It drew its conclusions from associated technical research, stakeholder surveys and interviews, Phase 1 consultation responses and on-going feedback from stakeholders.

Note: Following Phase 2b consultation we have provided an updated covering note to the IIA. The cover note outlines where impacts previously identified from the Phase 2b proposals have changed and whether significant impacts of the final proposed Scheme have also changed.

Updated Cost and Business Impact Assessment (CBIA) and IIA

The original IIA concluded that the HGV Safety Permit Scheme was the recommended approach to adopt and the Phase 2a consultation responses supported this proposal. Having confirmed this approach, it was considered appropriate to update the CBIA and the IIA in order to incorporate further detail around the preferred scheme compared to the baseline scenario. This further detail included updated costs and a more accurate assignment of DVS ratings to the London-wide HGV population (over 12 tonnes gvw).

In order to more accurately assign the London population of HGVs over 12 tonne gvw by make and model against DVS ratings, we commissioned manual vehicle counts and analysis23. These surveys were carried out in April 2018 at a range of geographical locations across Greater London over a period of five working days between 07:00 and 19:00. The study identified that 29 per cent of the current London HGV (over 12 tonne gvw) population are rated zero star, 43 per cent rated one to two star and 28 per cent rated three to five star. These updated figures were used to input to the IIA, which previously used a much wider range.

Costs and benefits of the scheme

With this more accurate HGV population data and updated IIA, the benefit/cost ratio (BCR) to 2030 has been re-estimated at between 0.10:1 to 0.33:1, higher than that outlined in the IIA for the Phase 2a consultation (between 0.140:1 to 0.168:1). This increase is a result of the decrease in estimated costs borne by businesses (no certification cost and reductions in assumed safety mitigation test costs per vehicle24). As before the main costs of the scheme are to the public sector to set up and operate the scheme, plus the direct costs to HGV owners and operators to fit safe system measures (where required) indirect costs to the wider economy (knock-on effect of more expensive deliveries). We used an estimated

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23 Appendix 5 - AECOM (2018), Heavy Goods Vehicle Survey
24 A cost of £450 per vehicle for a safe system assessment was assumed for the purposes of the IIA but it has since been proposed that there will be no requirement for a physical assessment of the safe system equipment prior to permit application and therefore no cost to operators
maximum cost of around £2,000 per vehicle to fit equipment to comply with all safe system requirements if not already fitted. In practice, many operators will already be at or near this level and the cost to them will be considerably less.

The costs of an operator’s HGV colliding with a pedestrian or cyclist are likely to be far higher than the costs of installing additional safe system mitigating measures in terms of disruption to the business, including police investigations and coroners’ court attendance, loss of use of the vehicle and driver, and potential reputational damage. Most importantly of all is the very real pain and anguish for people affected by an accident that might have been avoided. The main benefits of the scheme come from reduced road fatalities and serious injuries, plus increased levels of walking and cycling as a result of people feeling safer on the roads.

Limitations in the available data make it difficult to fully quantify and monetise all factors that the scheme might influence. For example, the implications of increased cycling and walking levels are not factored into the BCR and ambiguities in collision data may cause benefits to be slightly underestimated.

The IIA cover note and full can be found in Appendix 3a and Appendix 3b respectively. The updated Cost and Business Impact Assessment can be found in Appendix 4. The HGV manual vehicle survey report can be found in Appendix 5.

Section 4 - HGV Safety Permit application process for operators (from October 2019)

Step 1 – Identify if a vehicle is in-scope

All HGVs over 12 tonne gvw (N3) will require a Safety Permit to enter or operate in London from 26 October 2020 unless exempt. Operators\(^{25}\) of vehicles requiring a Permit will need to apply to TfL.

There will be a small number of fully exempt specialist vehicles that are not required to apply for a Permit. There will also be a small number of vehicles that will be partially exempt from safe system requirements (e.g. sideguards) should the vehicle be rated zero star or not rated. Vehicles partially exempt from the safe system must still apply for a Permit in the same way as non-exempt vehicles. A full list of both the specialist vehicles and safe system exemptions is available at Appendix 6.

A compliance checker tool will be available in autumn this year via our TfL website enable operators to check whether their vehicle(s) are subject to the Scheme.

Step 2 - Obtain a Direct Vision Standard star rating

If a vehicle is in-scope of the Scheme, the next step to obtaining a Permit is to find out the DVS star rating of the vehicle (if not already known). Star ratings are unique to the make,

\(^{25}\) For hire vehicles, either the lease company or the hirer can request a DVS rating and apply for the HGV safety permit. Any associated PCNs (see Section 5) for the vehicle would be sent to the registered keeper of the vehicle. The lease company may transfer liability to the hirer as defined in the hire/lease contract
model and specific configuration of the vehicle. For this reason, operators must contact their vehicle manufacturer(s) and provide the vehicle chassis or identification number (VIN) to request a star rating. The appropriate contact details can be found at [tfl.gov.uk/direct-vision-HGVs](https://tfl.gov.uk/direct-vision-HGVs).

The vehicle manufacturer will inform the applicant of the star rating of the vehicle and at the same time will inform us of the rating so we may update our database of star ratings.

In the rare instance that a vehicle manufacturer is unable to provide a rating for a vehicle model\(^{26}\), operators will still be able to apply for a Permit but the unrated vehicle will be treated as the same as a zero star rated vehicle.

Vehicles rated zero star (including unrated) will need to ensure a safe system (see Section 3) is fitted to the vehicle before a Permit application can be made. The Permit will then be granted subject to safe system conditions that require mitigation measures are fitted and operated properly. Permit applications can be made straight away for vehicles rated one star or above and Permits will be granted for these vehicles without the need for providing safe system evidence.

**Step 3 – Apply for a Permit via the online application portal**

Once DVS star ratings have been obtained and safe system requirements met where necessary (zero star or ‘unrated’ vehicles), operators can apply for a single vehicle Permit or multiple Permits for a fleet of vehicles within a single application.

It is proposed that the online application portal will be accessed via the TfL website. Non-UK registered vehicles will apply for Permits via the same portal. Translation functionality is already built into the TfL website.

Opening an application will require confirmation on vehicle country of origin, name of operator, contact details and the mandatory entry of a valid email address.

When the vehicle registration mark (VRM) is entered, this will be checked against the database of ratings to confirm a DVS star rating. If the vehicle is in scope (HGV over 12 tonnes and not exempt) and the DVS star rating has not been pre-populated in the database (e.g. if a rating has not been requested from the vehicle manufacturer or if TfL has been unable to calculate it automatically), it will return ‘unknown’ and direct the operator to contact their vehicle manufacturer to request a rating.

Depending on the DVS star rating of the vehicle(s), the routes to Permit approval will be as follows:

**Proposals for HGVs rated one to five stars**

- Before a Permit is issued, operators will be asked to declare that all information entered in the application is accurate to the best of their knowledge and understand

\(^{26}\) HGVs that pre-date available vehicle manufacturer data (therefore being LEZ non-compliant) and a select number of low volume ranges will be assigned an automatic zero star rating unless data or other evidence is supplied by the operator that the vehicle should be classed as having a higher star rating.
that vehicles found to be in breach of the Permit terms may have the associated Permit revoked or suspended at any time

- Once the application is completed, the Permit will be issued and confirmation sent via email including a Permit reference number. This will be logged on the TfL database to ensure PCNs are not issued against this VRM when scheme enforcement goes live

**Proposals for HGVs rated zero star or un-rated**

- Operators will be required to provide evidence that the vehicle has been fitted with all required safe system equipment as outlined in Appendix 2
- Each requirement will be outlined and the operator will be asked to upload appropriate evidence that they meet the requirement. This will be limited to the format of photos and pdf documents. Examples of suitable evidence will be provided to ensure it is clear what will and will not be accepted by the scheme administrator. The vehicle VRM must be identifiable in the uploaded evidence pack
- Vehicles that are partially exempt from certain requirements (e.g. sideguards) will still be required to upload evidence demonstrating and supporting the reason for exemption, for example a photo of the items in the area where a sideguard would otherwise be required to be fitted, such as fuel tanks and equipment boxes (see list of exemptions in Appendix 6)
- Before the application is submitted for review, operators will be asked to declare that all information entered in the application is accurate to the best of their knowledge and understand that vehicles found to be in breach of the Permit terms may have the associated Permit revoked or suspended at any time
- When the application has been submitted, the operator will receive a confirmation email. The scheme administrators will then review and respond to the application
- Where an application is reviewed and deemed compliant, the operator will be issued a confirmation email with electronic Permit reference number and expiry date
- Where an application is reviewed and deemed non-compliant, the operator will be informed and provided with reasons for rejection of the application. They will then be required to re-submit the required information

**Proposals for multiple vehicle Permit applications**

The application portal will have the functionality to grant multiple vehicle Permits under a single application. Operators will be able to enter multiple VRMs which will be checked against the database.

- HGVs with a DVS star rating of one or more will be granted Permits. They will not be required to provide evidence of safe system measures. The Permit reference numbers for these vehicles will be confirmed electronically via email
- For HGVs that are rated zero star or un-rated, operators will be required to upload evidence that these vehicles have been fitted with the required safe system as outlined above. This will not be required for every zero star vehicle in the fleet.
Depending on the number of zero star or un-rated vehicles in the fleet, a defined proportion of evidence packs will be required (see Table 2)

<table>
<thead>
<tr>
<th>Zero star fleet size</th>
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<tr>
<td>≤ 5</td>
<td>Evidence supplied for 100% of vehicles</td>
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<tr>
<td>6-20</td>
<td>Evidence supplied for 50% of vehicles (minimum 5 vehicles)</td>
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<td>21-50</td>
<td>Evidence supplied for 30% of vehicles (minimum 10 vehicles)</td>
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<tr>
<td>51-100</td>
<td>Evidence supplied for 20% of vehicles (minimum 15 vehicles)</td>
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<tr>
<td>&gt;100</td>
<td>Evidence supplied for 5% of vehicles (minimum 20 vehicles)</td>
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Table 2: Proportions of evidence required for zero star fleet applications

- Again, operators will be asked to declare that all information entered in the application is accurate to the best of their knowledge and understand that vehicles found to be in breach of the Permit terms may have the associated Permit revoked or suspended at any time
- When the application has been submitted, the operator will receive a confirmation email with reference number. The scheme administrators will then review and respond to the application
- Where a HGV evidence pack is reviewed and deemed compliant with application requirements, the operator will be granted a Permit for that specific vehicle (confirmed via email with electronic Permit reference number)
- Where an application is reviewed and deemed non-compliant, the operator will be informed of reasons for non-compliance. They will then need to re-submit the required information
- Permits for the entire zero star or un-rated fleet will not be issued until all required evidence has been approved. Once approved, electronic Permit references will be sent via email for all zero star rated vehicles
- All approved Permits will be logged on the TfL database to ensure PCNs are not issued against these VRMs

**Permit administration**

HGV Safety Permits will be issued electronically only. Operators will receive a Permit reference number with their confirmation email but no certificate or hard copy Permit will be issued. There is no requirement to produce this Permit reference at any point as enforcement will be done by comparing the database of vehicle registrations with valid Permits with the ANPR camera captures of vehicles entering London.\(^{27}\)

**Permit duration**

\(^{27}\) This camera network will expand to Inner London up to the North and South Circular Roads under the Ultra-Low Emission Zone (ULEZ) from 26 October 2021.
All Permits granted between October 2019 (start of voluntary Permitting) and October 2020 (start of mandatory Permits and enforcement) will have a commencement date of October 2020. The duration of the Permit will depend on the following factors:

- Zero star or un-rated vehicles with an approved safe system will be granted a Permit until 26 October 2024 (when the progressive safe system will be required for vehicles rated two star or below)
- One and two star vehicles will be granted Permits until 26 October 2024 (when the progressive safe system will be required)
- Three, four and five star vehicles will be granted a ten year Permit

Expiration of Permit

Once a Permit expires, a new full application will need to be submitted as per the process outlined in Section 4.

Transfer of vehicle

Where a vehicle is sold and purchased by a new owner within the Permit life, the new owner must reapply for a new Permit. This will ensure records for enforcement are up to date.

Permit cost

Permits will be free of charge – there will be no cost to the operator when applying for the Permit(s).

Permits and GDPR

All Permit administration systems will be developed in compliance with General Data Protection Regulations (GDPR).

Section 5 – Enforcement of the scheme

The HGV Safety Permit allows for a fully enforceable scheme whereby the absence of a Permit or a vehicle not operating in compliance with safe system Permit conditions (where applicable) becomes a contravention for which a PCN can be issued.

Operators of vehicles over 12 tonnes gvw will need to ensure they follow the process outlined in Section 4 to obtain a valid Permit for each vehicle. It is proposed that Permits will be issued from October 2019 on a voluntary basis with enforcement by PCN commencing from 26 October 2020. This allows a year for operators to obtain Permits and ensure compliance before enforcement commences.

ANPR camera enforcement

It is proposed that the Scheme would be enforced using Automatic Number Plate Recognition (ANPR) cameras – both fixed and mobile. The existing network of TfL ANPR
cameras used for Congestion Charge, Ultra Low Emission Zone and Low Emission Zone enforcement will be utilised to capture vehicles not holding a DVS permit.\textsuperscript{28}

**Signage**

The Scheme will cover the same area as the original Safer Lorry Scheme (SLS) and the Low Emission Zone (LEZ). The SLS and LEZ boundary was designed explicitly to provide opportunities for non-compliant larger vehicles to divert away or 'U-turn' at the point of entry, within the Greater London boundary.

In most cases the signs for the SLS zone are co-located with LEZ entry signs. However, there are parts of the LEZ that lie on Motorways. The Traffic Regulation Orders (TROs) for the SLS and HGV Safety Permit Scheme do not apply on motorways and signs are therefore placed at the end of the motorway section at the point where the traffic authority powers for the TROs commence.

The signs used for the original SLS will be used for the HGV Safety Permit, with no plans to amend the pre-existing boundary signs.

![Figure 4: Example of existing Safer Lorry Scheme sign that will be used for the HGV Safety Permit Scheme. Note: the HGV Safety Permit applies to HGVs over 12 tonnes gvw.](image)

**On-street compliance checks**

We will work in partnership with the police and DVSA to deliver targeted enforcement activity focused on the most non-compliant and dangerous drivers, vehicles and operators through the London Freight Enforcement Partnership\textsuperscript{29}. On-street enforcement officers will be tasked with checking the safe system requirements of an HGV if the vehicle is stopped at

\textsuperscript{28} There will be a new ANPR camera network when the ULEZ expands to Inner London up to the North and South Circular Roads from October 2021.

\textsuperscript{29} The London Freight Enforcement Partnership is a joint partnership between TfL, City of London Police, Driver and Vehicle Standards Agency (DVSA), and the Metropolitan Police Service to target dangerously non-compliant drivers, vehicles and operators on London’s roads.

Since the launch, more than 33,000 freight vehicles have been stopped and checked, and 9,114 fixed penalty notices and traffic offence reports have been issued, acting as deterrents and forcing operators to improve their standards.
the side of the road. These officers will be specially trained in the requirements of the safe system and will be deployed in an intelligence led way and in partnership with police and DVSA officers. This will involve a visual observation of a stopped vehicle to check compliance with the requirements of the safe system. Staff will use existing apps on handheld devices to report compliance to the DVS Permitting team to inform additional back office engagement and enforcement activity. Information will also be passed on to the Freight Compliance Unit, the UK’s first partnership intelligence unit focused on non-compliant and dangerous HGVs and freight operators to inform targeting. Vehicles found to be non-compliant will be in breach of their Permit conditions and may therefore have their Permit suspended and be subject to additional checks. It is expected that over 2000 vehicles per year will be checked using this approach.

**Penalty Charge Notice**

It is proposed that from 26 October 2020, a HGV found to be in breach of the Permit Scheme will be issued a Penalty Charge Notice (PCN) at £550 for operators (a £130 PCN for the driver may apply where considered appropriate) with a prompt payment reduction of 50 per cent if paid within 14 days. Enforcement against the driver is likely only in exceptional or unusual circumstances as the operator has primary responsibility for the vehicle and their driver’s conduct. It is likely that the driver would only be issued a PCN where they are found to be directly at fault by acting against management instructions, for example by removing or deactivating equipment fitted to the vehicle. We will administer PCNs in accordance with the relevant statutory processes. There will also be the ability to revoke or suspend a HGV Safety Permit if a vehicle that has been granted a Permit is later found to be in breach of the Permit terms; suspension can be immediate if there is a danger to public safety. These terms will be clearly communicated during the application process.

**Non-UK registered vehicles**

Non-UK registered vehicles that are in breach of the Permit Scheme will be enforced against in the same way. Recovery of unpaid penalties to non-UK registered vehicles is undertaken by a dedicated European debt recovery agency and we have established links with many European vehicle licensing agencies. We will always issue and recover penalties against vehicles registered outside the United Kingdom wherever possible.

**Note:** Information on communication of the Scheme to non-UK registered vehicles is set out below.

**Appeals process**

Where an operator/driver believes a PCN has been issued incorrectly it can be challenged by making a representation online or in writing. The PCN that is issued will include information on how to make a representation. The PCN is normally sent to the registered keeper of the vehicle as recorded by the DVLA.

PCNs may also be issued to the nominated hirer/leasee of the vehicle if a valid hire keeper is provided by the registered keeper. Representations will be made to via the portal in the first
instance and can be taken to the independent London Tribunals should a notice of rejection be issued.

Section 6 – Legal implementation of the Scheme

The proposed method of statutory implementation is through a Traffic Regulation Order (TRO), the legal mechanism that allows traffic authorities to control or regulate vehicular traffic on road safety grounds. A TRO can be decriminalised allowing the Safety Permit Scheme to be enforced by issuing civil enforcement PCNs without the need for police intervention.

The Greater London (Restriction of Goods Vehicles) Traffic Order 1985

The London Councils’ London Lorry Control Scheme (LLCS) operates under the existing Greater London (Restriction of Goods Vehicles) Traffic Order 1985 (“1985 TRO”, as amended) – operated by London Councils’ Transport and Environment Committee (TEC). This imposes restrictions on the movement of HGVs over 18 tonnes during unsocial hours on certain roads, which requires the HGV to have been issued a Permit under that scheme (LLCS Permit). LLCS Permits are currently granted in accordance with a policy statement and subject to approved Permit conditions.

We propose the 1985 TRO should be changed to incorporate the HGV Safety Permit Scheme for HGVs over 12 tonnes gvw, alongside its LLCS provisions, which would remain unchanged. This has been agreed in principle, subject the relevant statutory consultation and objection procedures set out in applicable regulations, and its consideration of any statutory objections and other representations concerning the HGV Safety Permit Scheme as a result of this Phase 2c consultation.

Incorporating the HGV Safety Permit Scheme into the 1985 TRO alongside the LLCS would have the following advantages:

- A single amendment by the TEC to one existing TRO already covering all roads in Greater London
- An easily enforceable Permit scheme that is already de-criminalised with no requirement for police or DVSA resource
- Two levels of penalty for non-compliance at £550 for operators (a £130 PCN for the driver where considered appropriate) – a significantly more effective deterrent than a £50 Fixed Penalty Notice (FPN)

Statutory consultation on the Amendment Order

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30 Sections 1 and 6 of the Road Traffic Regulation Act 1984
31 The London borough of Barnet left the ambit of 1985 TRO in 1996 and roads in its area are not subject to its provisions. It is proposed, in principle, that Barnet will re-join the 1985 TRO before 26 October 2020, subject to consultation and the necessary statutory procedures involved. This would mean that all roads in the Borough would come under the LLCS and HGV Safety Permit Schemes.
32 A criminal FPN at the single level of £50 is the normal way TROs are enforced unless referred to the magistrate’s court where a maximum £1000 fine can be imposed
A new TRO is required to make the necessary changes to the 1985 TRO to incorporate the requirements of the HGV Safety Standard Scheme alongside its existing provisions to do with the LLCS. This is the Greater London (Restriction of Goods Vehicles) Traffic Order 1985 (Amendment) Order 2019.

Its purpose is to amend the 1985 TRO and so it is referred to as the “Amendment Order”. The Amendment Order is promoted by the TEC, which has appointed TfL to administer the relevant procedures under the Local Authorities Traffic Orders (Procedure) (England & Wales) Regulations 1996. However, TEC retains responsibility for considering any statutory objections to the Amendment Order and other representations received concerning the Scheme generally, including whether a public inquiry into the order is required and the appointment of an independent Inspector at an inquiry to consider objections. Ultimately TEC will decide whether or not to make the Amendment Order, with or without modification, and so proceed with the HGV Safety Permit Scheme following consideration of the Inspector’s report (if any).

1985 TRO changes

The major change is to incorporate the Scheme by inserting into Article 3(a)(i) a prohibition on HGVs over 12 tonnes operating in London without HGV Safety Permit issued under Article 4(1) in accordance with an approved Policy Statement. This follows the same approach as with the LLCS. Other proposed changes:

• Ensure the current LLCS would continue to operate under the 1985 Order and its movement restrictions on 18 tonne vehicles during unsocial hours off the Excluded Route Network remain unaffected
• Allow greater flexibility in terms of the approval and issue of different types of Permit (LLCS Permits and HGV Safety Permits), Permit-conditions, policy statements and other matters to reflect the requirements of each Scheme (in addition, the word “permit” replaces the previous term “permission”).
• Allow Permits of both types to be suspended with immediate effect where there are public safety concerns.
• Allow for the approval of further vehicle exemptions.
• Allow for the use of electronic documents, the internet and email for formal processes.

A copy of the Amendment Order is at Appendix 15, the current 1985 TRO at Appendix 16 and a “consolidated version” that shows the additions and deletions proposed to be made by the Amendment Order at Appendix 17. The Amendment TRO should be read in conjunction with the following two documents:

Supporting TRO consultation documents

A Policy Statement: this sets out the policy basis for issuing Permits, including the new HGV Safety Permit. A copy of a proposed draft combined LLCS and HGV Safety Permit Policy Statement is at Appendix 19. The policy considerations relating to the LLCS are unchanged.
Those for the HGV Safety Permit Scheme state that a minimum DVS rating is to be regarded as the appropriate level of direct vision necessary to operate a HGV safely in Greater London without requiring additional safety (Safe System) measures to be fitted to the vehicle. This is one star until 26 October 2024 and three stars from that date.

**Permit Conditions**: set out any conditions subject to which a Permit is to be issued. Here, the conditions for a HGV Safety Permit are sufficiently different to the LLCS to justify its own set of conditions, modelled closely on the LLCS conditions. A copy of the proposed draft HGV Safety Permit Conditions is at Appendix 20. It sets out conditions applicable to all HGVs and the safe system conditions for those not meeting the minimum DVS rating.

Any objections to the Amendment Order (including the Policy Statement and Permit Conditions), setting out the grounds on which the objection is made, must be made before 23 May 2019. This can include feedback on the proposals for the Scheme generally.

**London Borough of Barnet**

The London Borough of Barnet ceased to participate in the LLCS in 1996 and did so by passing its own traffic regulation order to take it out of the ambit of the 1985 TRO that originally established the LLCS. Barnet has indicated it would like to be part of the HGV Safety Permit Scheme and to re-join the LLCS. TfL and London Councils are discussing with Barnet how best for it to come back under the jurisdiction of the 1985 TRO.

**European Union notification**

As the HGV Safety Permit Scheme proposal introduces a new ‘technical standard’ for HGVs, it required notification by the UK Government to the European Commission, and this was done in 2018. The notification included all scheme proposals including the proposed use of the 1985 TRO as the legal mechanism to implement the scheme.

On 6 December 2018, the European Commission confirmed they had no objection to the Scheme. The Commission said it “appreciated all efforts by national authorities to improve road safety. As the Commission already indicated in its Communication ‘Europe on the Move’ (COM (2018)293) and in the accompanying EU Strategic Action Plan on Road Safety, safety is fundamental to any transport system; it must always be the top priority. As mobility continues to grow and is radically transformed by digitisation, decarbonisation and innovation, the opportunities to further improve safety performance must be seized. Therefore, the Commission would agree with the objectives pursued by the UK authorities with the notified draft Scheme.” The Commission commented that the Scheme should be easily accessible to foreign language and non-UK operators and the position of left-hand drive vehicles clarified. We have since taken these comments on-board and have set out our response below.

**Accessibility for non-UK operators**

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33 Under Directive (EU) 2015/1535
Non-UK registered vehicles will be able to apply for Permits via the same permit application portal as UK operators. Translation functionality is already built into the TfL website which has the ability to translate into 103 different languages.

We will communicate details of the Scheme to Non-UK vehicle operators via the Urban Access Regulations in Europe portal. This portal provides details for HGV operators from abroad working in London. A link to the Permit application portal, along with helpline contact details will be available. More information on the Urban Access Regulations in Europe portal can be found at urbanaccessregulations.eu/

During the pre-compliance year (October 2019 to October 2020) we will run a marketing awareness campaign for the Scheme which will provide information on how to comply and apply for a Permit. As well as a UK focused campaign, there will be a campaign focusing on informing non-UK based operators. The campaign will include a range of activities, including:

- Publication on the Urban Access Regulations in Europe portal
- Article in European Freight and Servicing media
- Communication via European Freight Trade Associations and stakeholders
- Marketing at prominent locations for non-UK HGVs, e.g. ports and Eurotunnel

Left-hand drive vehicles

For left-hand drive vehicles, mirrors, cameras and sensors should be fitted appropriately to account for the blind spot on the right-hand side.

Section 7 – Next steps

Below is a summary of the key milestones towards implementation of the proposed scheme.

Phase 2c consultation (26 April to 23 May 2019): This current statutory consultation outlines the final scheme proposals and the Amendment Order to make changes to the 1985 TRO that will implement the HGV Safety Permit Scheme

Scheme ‘go live’ (October 2019): Operators will be able to apply for HGV Safety Permits from this date on a voluntary basis

Scheme enforcement (26 October 2020): Safety Permits will be mandatory from this date. Enforcement of the HGV Safety Permit Scheme commences. HGVs over 12 tonne gvw without a HGV safety Permit will be in breach of the scheme and will attract a PCN

2022: Engage and consult with manufacturers, industry and other stakeholders on any new technology or safety measures as part of a progressive safe system for 2024

2024: HGVs rated two stars or below will be banned from entering London unless they operate to the progressive safe system
## Section 8 – List of supporting documents

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