



HGV safety permit guidance

For operators entering London

MAYOR OF LONDON



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HGV safety permit guidance for operators entering London

HGVs more than 12 tonnes gross vehicle weight (GVW) will require an HGV safety permit to operate in Greater London. This guidance explains what this means for your vehicles.



Introduction

One of the Mayor of London, Sadiq Khan's top priorities is the safety of Londoners.

The Mayor has adopted Vision Zero for road danger in London, aiming for all deaths and serious injuries from road collisions to be eliminated from London's streets by 2041. Vision Zero means ensuring the street environment incorporates safe speeds, safe behaviours, safe street design and safe vehicles to target road danger at its source.

To achieve this target and reduce risk relating to heavy goods vehicles (HGVs) and people walking and cycling, we have developed the world's first Direct Vision Standard (DVS) and a safety permit for all lorries more than 12 tonnes GVW entering or operating in Greater London.

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For more information on the safety permit proposals visit:
tfl.gov.uk/direct-vision-HGVs

Purpose of this guide

This guide provides lorry operators with information on the vehicle requirements for getting a safety permit. More information on the permit application process is available on the TfL permit application web portal.

Do I need a safety permit?

All HGVs more than 12 tonnes GVW entering or operating in Greater London need to hold a valid safety permit. The application process for the safety permits opened on 28 October 2019. Enforcement will be introduced from 1 March 2021. The scheme will be enforced across Greater London, 24 hours a day, seven days a week.

How do I make my vehicle compliant?

1. If your vehicle meets the minimum DVS star rating, you will be able to apply for a permit (see section I.1).

From enforcement commencement, the minimum DVS rating will be one star to enter or operate in Greater London and this will then increase to a minimum of three stars in 2024.

2. If your vehicle does not meet the minimum DVS star rating, you will need to meet the 'Safe System' requirements to be granted a permit (see sections I.2-I.4).

It is unlawful to:

- ◆ Operate an HGV more than 12 tonnes GVW in Greater London without a permit
- ◆ Breach safety permit conditions

What is the Direct Vision Standard?

The DVS has been developed in order to address the high number of collisions in London involving HGVs and people walking and cycling.

The DVS objectively measures a driver's direct view through the windows of an HGV cab. This is communicated as a star rating from zero (poor) to five (excellent), which indicates the level of risk to people walking and cycling near the vehicle.

The DVS has been developed in consultation with an expert panel comprising researchers, academics and representatives from the freight industry, Europe's foremost HGV manufacturers and regulatory bodies.

What is the Safe System?

The Safe System is a series of vehicle safety measures (fitted after point of manufacture) which are designed to reduce the risks that HGVs present to people walking and cycling. To ensure consistency, the Safe System is aligned to other scheme requirements and existing regulations where possible.

The Safe System requirements have been identified as current industry good practice by an independent advisory group with representatives from cycling and pedestrian groups, industry trade associations, vehicle manufacturers and government organisations.

Where can I purchase Safe System equipment?

No specific make or brand of equipment or technology will be mandated as part of the Safe System.

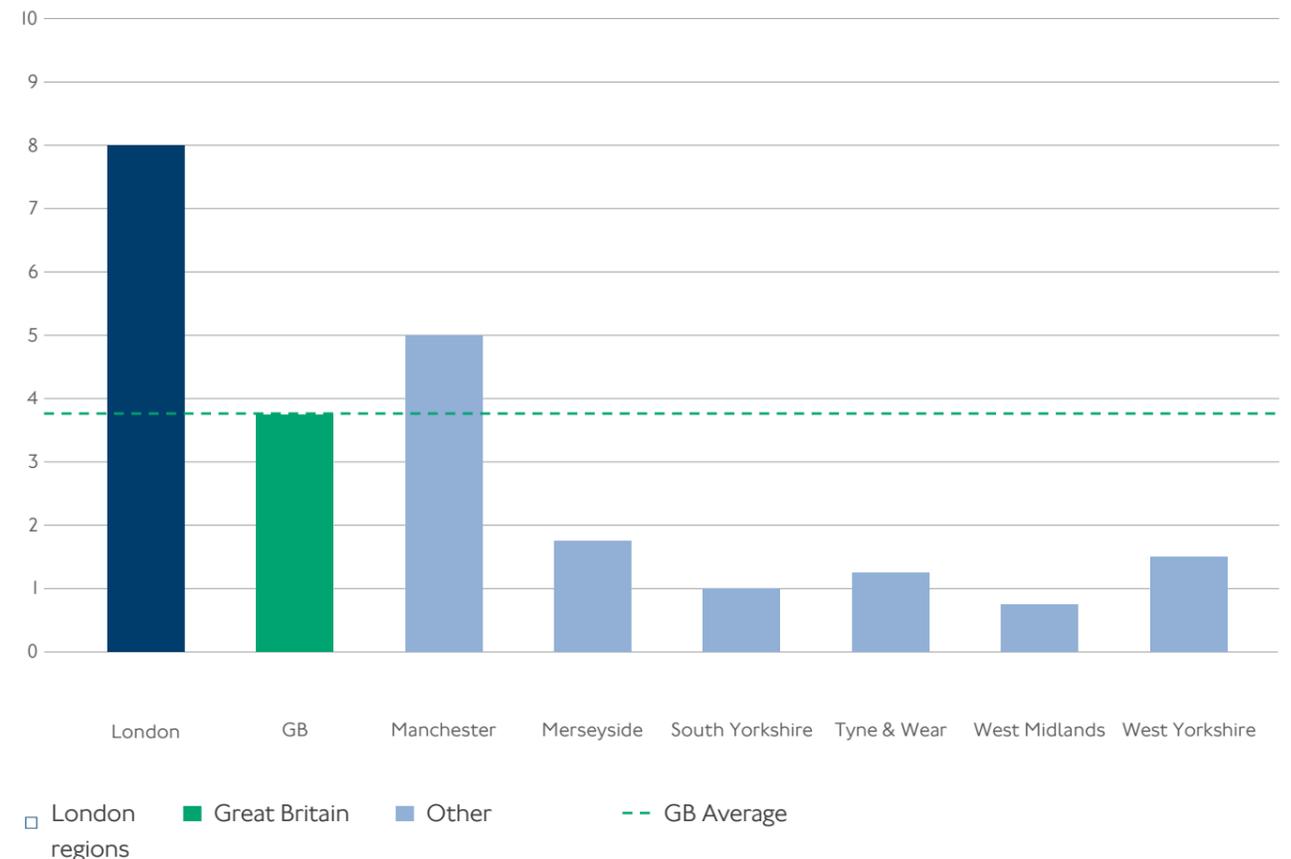
Safe System equipment can be purchased, though not exclusively, via the following organisations:

- ◆ Fleet Operator Recognition Scheme
www.fors-online.org.uk/cms/suppliers-and-supporters-offers
- ◆ Freight Transport Association
www.shop.fta.co.uk

Scheme tightening

The first review of the Safe System is scheduled for 2024, when it is proposed the minimum DVS star rating will be increased to three stars. This review will take into account any additional technology or safety equipment that was not available in 2020. This will become known as the Progressive Safe System.

Cyclist casualties from collisions with HGVs – London vs GB regions 2006-2015 (approximate casualties per billion cyclist kilometre)



Any proposed updates to the Safe System for 2024 will be subject to consultation in 2023.

Zero, one and two star-rated vehicles will need to feature the Progressive Safe System from 2024.

The Progressive Safe System will only include equipment that:

- ◆ Can be retrofitted to the HGV
- ◆ Is industry recognised and readily available on the market at the time
- ◆ Is not cost prohibitive

Exemptions

A list of vehicle exemptions can be found in Appendix A.

Applying for a permit

There is no charge for safety permits.

Permit duration

- ◆ Zero star-rated vehicles with an approved Safe System will be granted a permit until 2024
- ◆ One and two star-rated vehicles will be granted permits until 2024
- ◆ Three, four and five star-rated vehicles will be granted a 10-year permit

HGV safety permit requirements

The following matters (1.1 to 2.3) apply to all HGVs more than 12 tonnes GVW.



1 Principal requirement – direct vision

1.1 Vehicle star rating requirement

All vehicles shall obtain a star rating under the DVS system.¹ Every vehicle must meet a minimum DVS star rating of one star, unless exempt from the scheme (see Appendix A).



1.2 Purpose

To ensure a minimum standard of a driver's direct field of view and reduce the risk of close-proximity blind spot collisions.

1.3 Demonstration

The rating shall be determined by the vehicle's manufacturer using the approved HGV DVS technical protocol.

- ◆ Where this rating is one star or above, fleet operators will be able to apply for a safety permit with no further mandatory action required
- ◆ Where this rating is zero star, or where a vehicle is unable to be rated,¹ the vehicle shall be fitted with mitigating safety features as outlined in requirements 2 to 2.3, which will be

the conditions of the permit. Operators must be able to demonstrate compliance with these requirements when applying for the safety permit

1.4 Recommended specification

Operators of vehicles rated at one star or above are also encouraged to fit voluntarily the supplementary safety features outlined in requirements 2 to 2.3.

A record of star ratings will be kept by the vehicle manufacturer and passed on to TfL. Permits will not be automatically issued; fleet operators will still be required to apply for a permit when a new vehicle is procured.

Note: For existing vehicles, manufacturers will consider ratings based on the vehicle chassis number as provided by the operator. Any DVS rating advised will reflect the specification of the vehicle at first stage manufacture; multi-stage manufacture and later modifications are not reflected in the DVS rating. Your manufacturer will be able to advise.

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For more information on DVS star ratings and vehicle manufacturer contact details, visit: tfl.gov.uk/direct-vision-HGVs

¹ 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

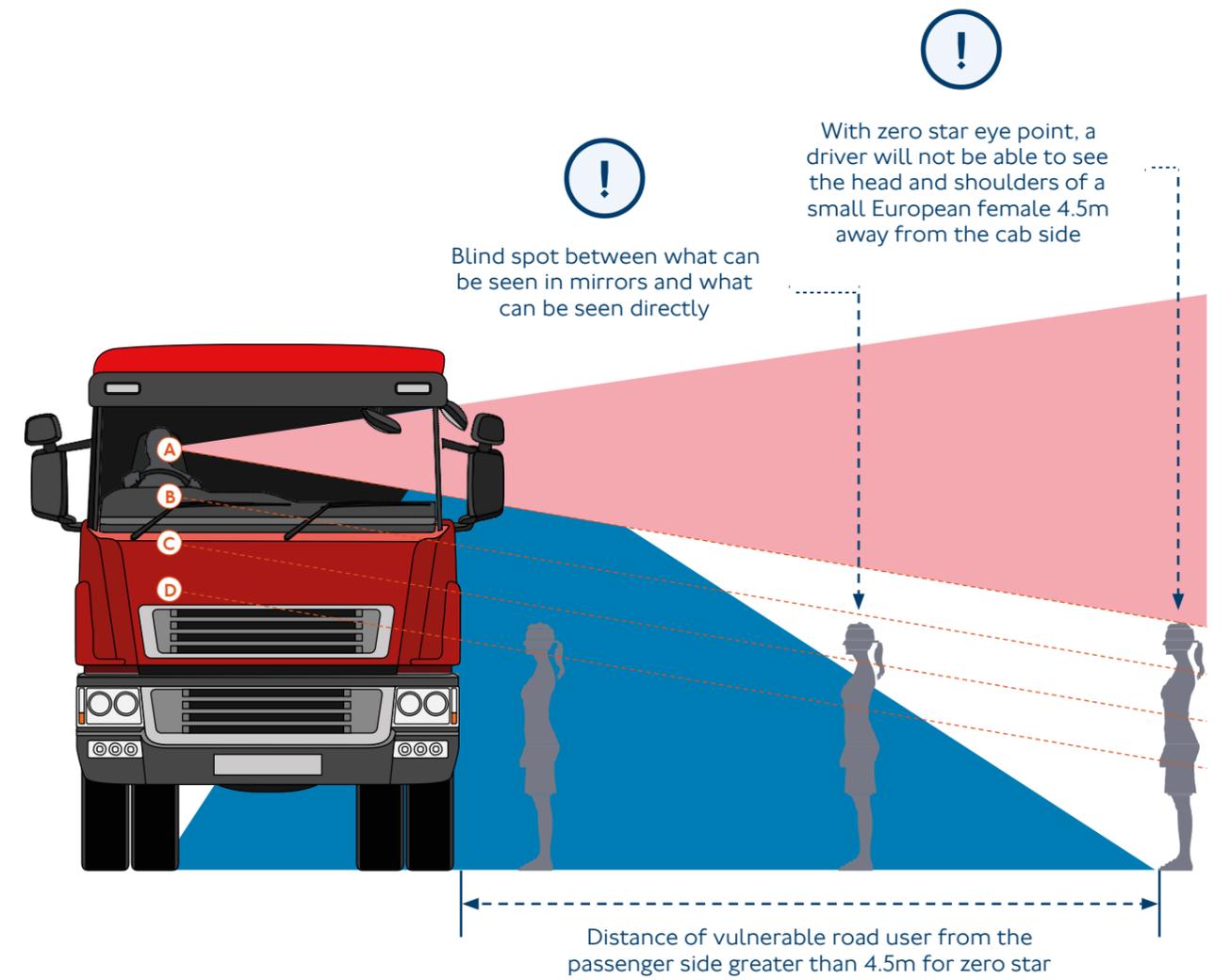
Good direct vision



Poor direct vision



HGV star rating boundaries



Category	Description
A	Zero star eye point
B	One star eye point
C	Three star eye point
D	Five star eye point

2. Safe System – for vehicles rated zero star only

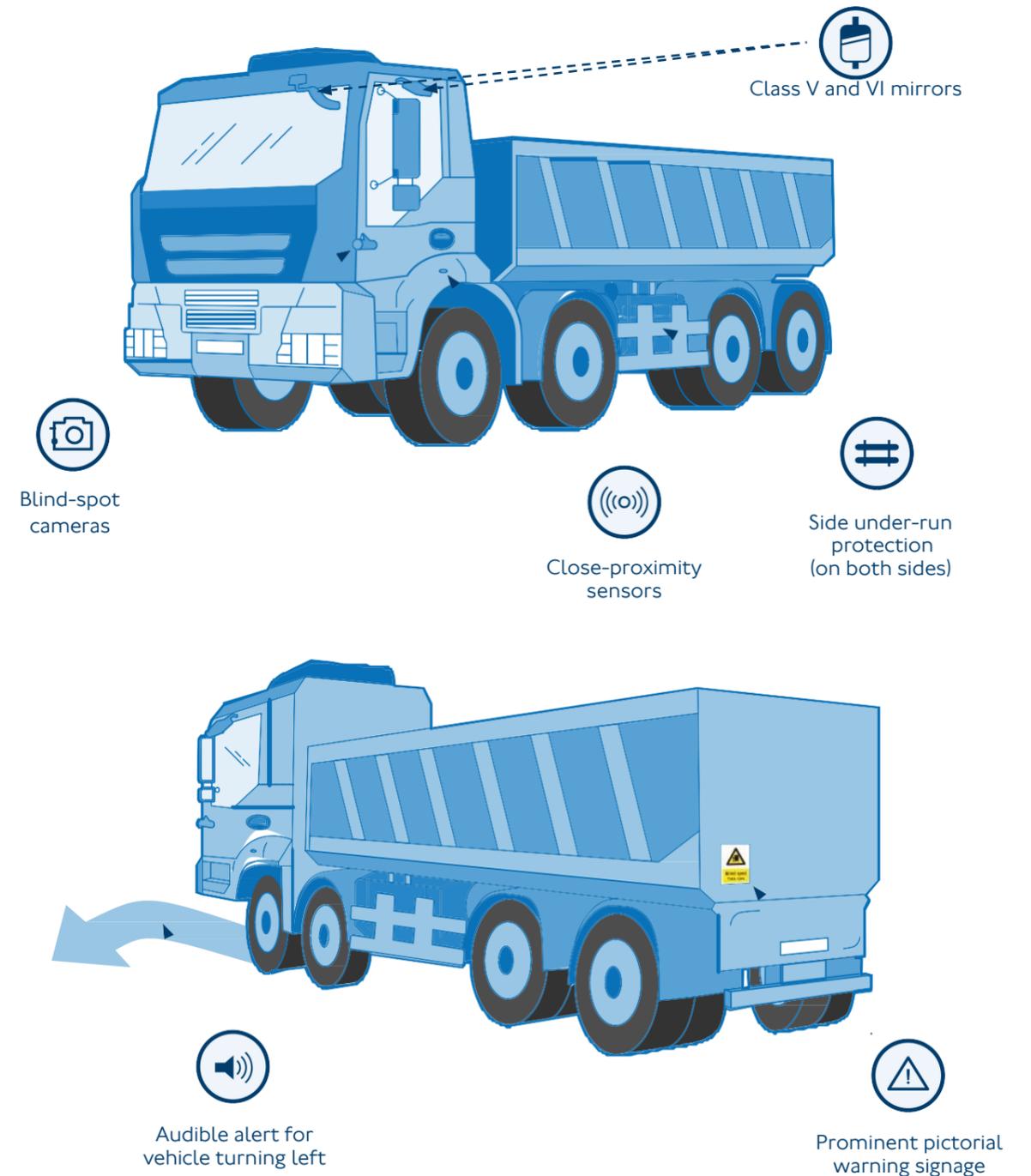
Research has shown that direct vision is the future in creating safer vehicles and safer urban environments. However, for direct vision to be implemented effectively a certain lead time is needed: in particular, time for the next generation of cab design to be available on the market and time for operators' fleet turnover.

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.

Overview of Safe System requirements for zero star-rated vehicles:

1. Class V mirror must be fitted to the nearside of the vehicle
2. Class VI mirror must be fitted to the front of the vehicle
3. Side under-run protection must be fitted to both sides of the vehicle (except where this is impractical or proves to be impossible)
4. External pictorial stickers and markings must be displayed on vehicles to warn vulnerable road users of the hazards around the vehicle
5. A sensor system that alerts the driver to the presence of a vulnerable road user must be fitted to the nearside of the vehicle
6. Audible vehicle manoeuvring warning must be fitted to warn vulnerable road users when a vehicle is turning left
7. A fully operational camera monitoring system must be fitted to the nearside of the vehicle

HGV Safe System



2.1 Indirect vision

Safe System permit conditions

The following vehicle requirements are mandatory for the Safe System.

2.1.1 Vehicle requirement

Vehicles that do not meet the minimum one-star direct vision rating (see I.I) must have front and side blind spots completely eliminated or minimised as far as practical and possible through the use of each of the following:

- ♦ A fully operational camera monitoring system
- ♦ Both Class V and VI mirrors
- ♦ A sensor system with driver alerts

2.1.2 Purpose

To improve visibility for drivers and reduce the risk of close-proximity blind spot collisions.

2.1.3 Demonstration

Indirect vision aids shall be fitted to the front and nearside of all vehicles.

Required equipment:

- ♦ Class V mirror must be fitted to the nearside of the vehicle
- ♦ Class VI mirror must be fitted to the front of the vehicle
- ♦ A fully operational camera monitoring system must be fitted to the nearside of the vehicle
- ♦ A sensor system alerting the driver to the presence of a person walking or cycling must be fitted to the nearside of the vehicle

Left-hand drive vehicles

Left-hand drive vehicles shall require the same equipment as right-hand drive vehicles. Mirrors, cameras and sensors must be fitted appropriately to account for the blind spot on the right-hand side of the vehicle.

Note: No specific make or brand of equipment or technology will be mandated as part of the safe system.

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Regulation 33 – The Road Vehicles (Construction and Use) Regulations 1986 – Mirrors

Regulation 46 UNECE – approval of devices for indirect vision

2.1.4 Recommended specification

Mirrors

Class V and VI mirrors must fulfil the fitment requirements contained in UNECE Regulation 46.²

Camera monitoring systems

Camera monitoring systems should aim to completely eliminate or minimise the remaining vehicle blind spot at the nearside as far as is practical and possible.

In-cab monitors should ideally be positioned close to a window edge or existing mirror location (without obscuring the view through the window) to minimise the time the driver needs to take their eyes from other important views to scan the monitor. Monitors only intended to show blind spots related to low speed manoeuvring (i.e. not mirror replacement cameras) may switch off at speeds above 20mph.

For best practice guidance on quality of monitor images refer to UNECE Regulation 46 Class V and VI mirror replacement camera monitoring systems.

Sensors

Sensors on rigid vehicles should ensure coverage six metres down the nearside or one metre from the rear of the vehicle, whichever is smaller. Sensors should not activate in relation to roadside furniture or stationary vehicles. In the case of tractor units, these should be suitably positioned to provide sufficient coverage, but preventing activation solely on articulation of the trailer.

Sensor systems should operate regardless of whether the direction indicators are activated and may switch off at speeds above 20mph.

We also recommend additional front sensors with coverage as defined by the UNECE Regulation 46 Class VI mirror coverage zone.

Checking equipment

Operators should make regular checks and take all reasonable measures to ensure all indirect vision systems and driver alerts remain fully operational. It is the operator's responsibility for any camera equipment and associated footage to comply with General Data Protection Regulation.

It is recommended that indirect vision devices require a minimum amount of driver intervention.

² Camera monitoring devices may be fitted to the vehicle as an alternative to fitting a Class V and/ or Class VI mirror where doing so is permitted by UNECE Regulation 46

Class V mirror



Class V mirror shall be fitted to the nearside of the vehicle

Class VI mirror



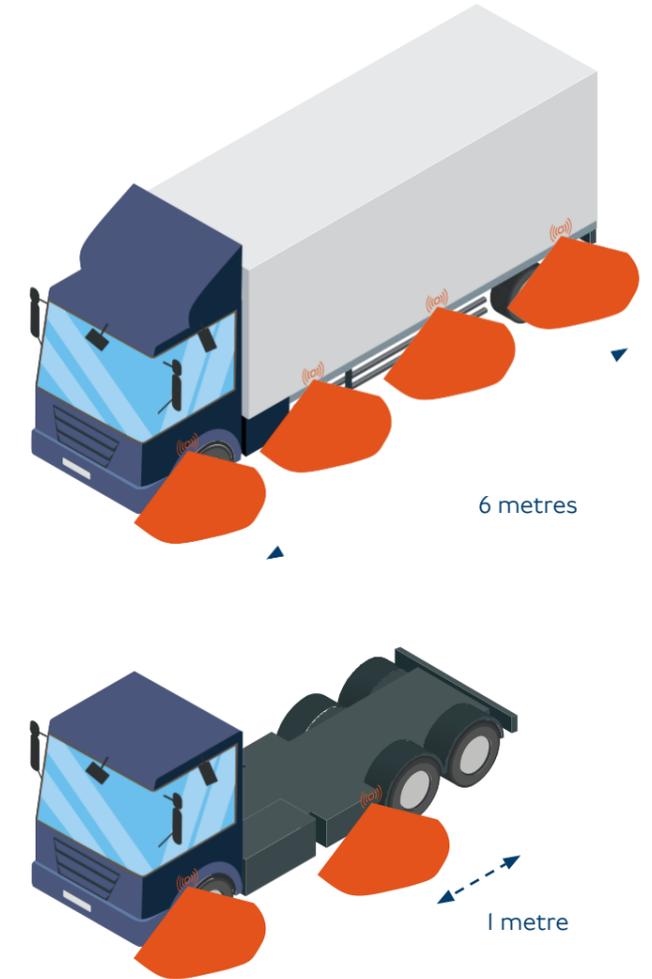
Class VI mirror shall be fitted to the front of the vehicle

Camera monitoring system



Camera monitoring systems should aim to completely eliminate or minimise the remaining vehicle blind spot at the nearside as far as is practical and possible.

Sensor system with driver alerts



It is recommended that sensors on rigid vehicles and articulated tractor units have coverage six metres down the nearside or one metre from the rear of the vehicle (or tractor unit), whichever is smaller.

2.2 Warning of intended manoeuvre

The following vehicle requirements are mandatory for the Safe System.

2.2.1 Vehicle requirement

All vehicles that do not meet the minimum one-star direct vision rating (see I.I) must be equipped with enhanced audible means to warn other road users of a vehicle's left manoeuvre, and prominent signage that visually warns other road users not to get too close to the vehicle.

2.2.2 Purpose

To reduce the risk of close-proximity collisions by alerting people walking and cycling to vehicle hazards.

2.2.3 Demonstration

All vehicles must be fitted with equipment to warn people walking and cycling of the vehicle's intended manoeuvre.

Required equipment:

- ♦ Audible vehicle warning must be fitted to warn people walking and cycling when a vehicle is turning left
- ♦ External pictorial stickers and markings must be displayed on vehicles to warn people walking and cycling of the hazards around the vehicle

2.2.4 Recommended specification

Audible warnings

The volume of the audible warning, measured at one metre from the sounder, should be between 65 and 88 decibels/dB(A).

The device should have a manual on/off switch for use between the hours of 23:30 and 07:00.

Operators should consider an audible warning system that combines spoken warnings and white noise.

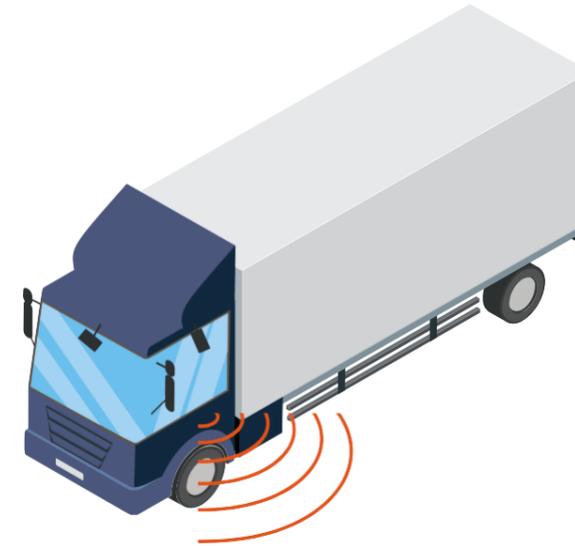
It is recommended that audible warning devices require a minimum amount of driver intervention.

For left-hand drive vehicles, the audible vehicle manoeuvring warning should be fitted to warn people walking and cycling when a vehicle is turning right.

Warning signage

Warning signage should not be offensive and should not give instructional advice to the people walking and cycling. The text point size should be legible by a cyclist or pedestrian at a reasonable distance from the vehicle.

Left-turn audible alarm



It is recommended that the volume of the audible warning, measured at one metre from the sounder, should be between 65 and 88 decibels. A combination of spoken word and white noise should be considered.

Warning signage



Instructional signage



2.3 Minimising physical impact of a hazard

The following vehicle requirement is mandatory for the Safe System.

2.3.1 Vehicle requirement

All vehicles that do not meet the minimum one-star direct vision rating (see I.I) shall be fitted with side under-run protection.

2.3.2 Purpose

To minimise the probability and severity of under-run collisions with people walking or cycling.

2.3.3 Demonstration

All vehicles shall be fitted with appropriate side under-run protection except where exempt (see appendix A for list of exemptions).

Requirement:

- ♦ Sideguards fitted to both sides of the vehicle unless this is impractical or proves to be impossible

2.3.4 Recommended specification

Operators should consider improved sideguard design, such as flat panel sideguard protection.

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Regulation 73 UNECE – lateral protection devices

Sideguards



Side under-run protection shall be fitted to both sides of the vehicle (except where this is impractical or proves to be impossible)

Appendix A

HGV safety permit scheme exemptions policy

Scope

The HGV safety permit scheme is only applicable to HGVs exceeding 12 tonne GVW. These are classed as N3 category vehicles. Vehicles falling outside this category are not required to apply for a permit.

HGVs fully exempt from the HGV safety permit scheme

Table I shows vehicle types that are fully exempt from the HGV safety permit scheme and are not required to hold a permit.

HGVs partially exempt from the HGV safety permit scheme

Table 2 shows vehicle types that are only partially exempt from specific elements of the HGV safety permit scheme. These vehicles must still hold a valid permit. Where the following vehicle type is rated zero star and therefore required to fit a Safe System of mitigating measures, they are exempt from the listed equipment only.

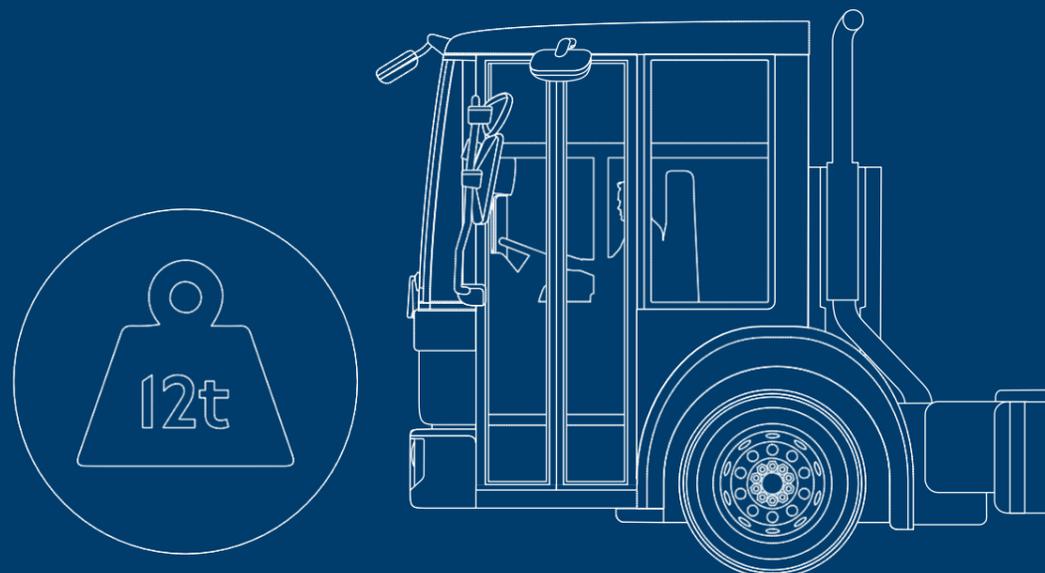


Table I: HGVs fully exempt from the HGV safety permit scheme

Vehicle type	DVS exemption
Emergency service vehicles, such as ambulances and fire engines, which have a taxation class of 'ambulance' or 'fire engine' on the date of travel	Exempt where applicable It is not considered appropriate to require emergency service vehicles to meet the DVS star rating threshold or to comply with the Safe System conditions as these vehicles need to be suitable for the operations for which they are designed
Specialist gritting and snow plough vehicles (London Boroughs)	Fully exempt These are specialist, very low-mileage vehicles that are only utilised in certain weather conditions
Armed Forces vehicles	Fully exempt It is not considered appropriate to require Armed Forces trucks to meet the DVS star rating threshold or to comply with the Safe System conditions as they need to be suitable for the operations for which they are designed
Ministry of Defence vehicles/military vehicles	Fully exempt where applicable It is not considered appropriate to require military trucks to meet the DVS star rating threshold or to comply with the Safe System conditions as these vehicles need to be suitable for the operations for which they are designed
Breakdown organisations/recovery vehicles	Fully exempt where applicable Exempt for vehicles called out by the emergency services whose load is required for the purposes of dealing with any actual or perceived emergency affecting the safety of persons or property
Historic vehicles	Fully exempt All vehicles that have a 'historic' vehicle tax class will be exempt from the DVS. This tax class excludes any vehicle used commercially. It would be inappropriate to require historic vehicles to comply with the Safe System permit conditions
Showman's vehicles	Fully exempt Showman's vehicles are eligible for an exemption from DVS if they are registered to a person following the business of a travelling showman and have been modified or specially constructed for this purpose. It would be inappropriate to require showman's vehicles to comply with the Safe System permit conditions
A vehicle to which no bodywork has been fitted and which is being driven or towed	Fully exempt where applicable <ol style="list-style-type: none"> For the purpose of a quality or safety check by its manufacturer or a dealer in, or distributor of, such vehicles To a place where, by previous arrangement, bodywork is to be fitted or work preparatory to the fitting of bodywork is to be carried out By previous arrangement to premises of a dealer or distributor
Mobile cranes	Exempt These are specialist, low-mileage vehicles requiring special permission to operate in London
A vehicle being driven/towed to a place where by previous arrangement Safe System equipment is to be fitted	Fully exempt

Table 2: HGVs partially exempt from the HGV safety permit scheme

a. Exemptions from sideguards

Vehicle type	DVS exemption
Road sweepers	Exempt
Gully emptiers/suckers	Exempt
Breakdown organisations/ recovery vehicles (where not fully exempt) – see condition	Exempt where applicable Only exempt where the sides of the vehicle are so designed and/or equipped that by their shape and characteristics their component parts together meet the requirements as to the fitting of sideguards or provision of lateral under-run protection
Tractors for articulated vehicles	Exempt All trailers used with the exempt tractor unit will be required to fit sideguards (unless covered by an additional exemption)
Vehicles mounted with cranes and/or access working platforms	Exempt where applicable a. From the forward point of the vehicle stabiliser legs b. Otherwise where it is not fully practicable to comply with requirements as to the fitting of sideguards
Vehicles fitted with items in the area where a sideguard would otherwise be required to be fitted, such as fuel tanks and equipment boxes	Exempt where applicable Only where the shape and characteristics of such items or components would provide lateral under-run protection equal to that of a sideguard, provided that the spaces between component items providing lateral under-run protection shall not exceed 300mm
Tank-vehicles (that is, a vehicle designed solely for the carriage of fluid substances in a closed tank permanently fitted to the vehicle and provided with hose or pipe connections for loading or unloading)	Exempt where applicable If it is not possible for practical reasons to comply with requirements as to the fitting of sideguards because to do so would prevent (not merely hinder) the operation of the vehicle's hose or pipe connections
Vehicle transporters (that is, a vehicle specially designed and constructed, and not merely adapted, to carry other vehicles loaded on to it from the front or the rear)	Exempt where applicable If the chassis rails are located on the extremities of the vehicle
Vehicles equipped with anchorage points for roll-on/roll-off transport	Exempt where applicable To the extent that there are gaps within the sideguard to accept the passage and tensioning of fixings or lashings

b. Exemptions from Class V and/or VI mirrors

Vehicle type	DVS exemption
Bonneted vehicles e.g. Unimog	Exempt From Class VI mirror only
Vehicles fitted with any combination of direct view and/or indirect vision devices as an alternative to fitting a Class V or Class VI mirror	Exempt As permitted by UNECE Regulation 46

c. Exemptions from camera monitoring systems

Vehicle type	DVS exemption
No vehicles will be exempt from fitment of a camera monitoring system	N/A – no vehicle exemptions

d. Exemptions from sensor system alerting the driver to the presence of a vulnerable road user

Vehicle type	DVS exemption
No vehicles will be exempt from fitment of a sensor system alerting the driver to the presence of a vulnerable road user	N/A – no vehicle exemptions

e. Exemptions from left turn audible alarm (right turn for left-hand drive vehicles)

Vehicle type	DVS exemption
No vehicles will be exempt from fitment of a left turn audible alarm (right turn for left-hand vehicles)	N/A – no vehicle exemptions

f. Exemptions from warning signage

Vehicle type	DVS exemption
Tractors for articulated vehicles	Exempt All trailers used with the tractor unit will be required to fit warning signage

Appendix B

Getting your HGV safety permit

Step 1

Do you require a HGV safety permit?

Step 2

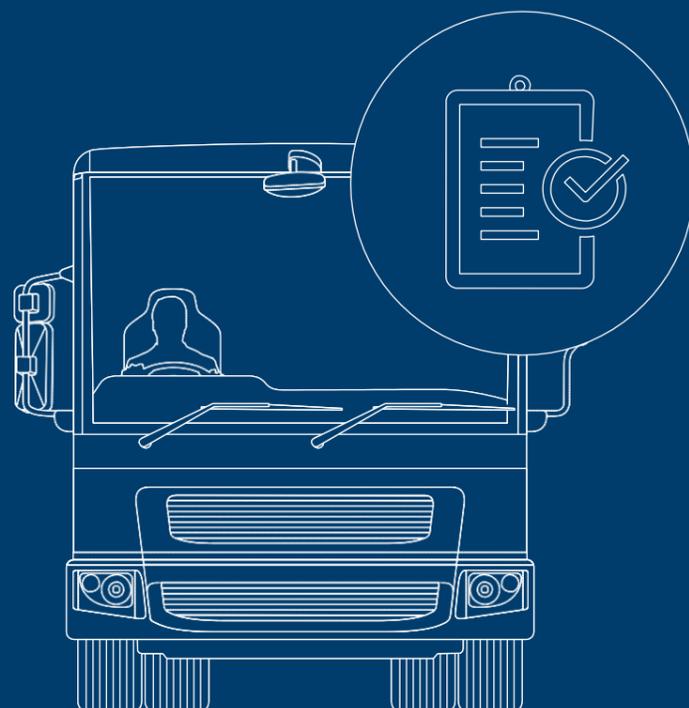
Find out your Direct Vision star rating

Step 3

Safe System requirements

Step 4

Apply for your permit



Permit administration

All HGVs more than 12 tonnes GVW require a HGV safety permit to enter or operate in London, unless exempt. Operators of vehicles requiring a permit need to apply to TfL. Permits are 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 is carried out by comparing the TfL database of vehicle registrations with valid permits with the automatic number plate recognition (ANPR) camera captures of vehicles entering London.

Where a vehicle with a valid permit is sold and purchased by a new owner, they must apply for a new permit. This will ensure records for enforcement are up to date.

Permit duration

The duration of the permit will depend on the following factors:

- ◆ Zero-star vehicles with an approved Safe System will be granted a permit until 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 2024 (when the Progressive Safe System will be required)
- ◆ Three, four and five-star vehicles will be granted a 10 year permit

Once a permit expires, a new full application will need to be submitted.

If your vehicle is zero star-rated, you will need to upload two photos (front/side and rear/side) as evidence that it has been fitted with the Safe System equipment.

Zero-star permits will be valid until October 2024



One and two-star permits will be valid until October 2024



Three, four and five-star permits will be valid for 10 years



Permit cost

Permits are free of charge – there is no cost to the operator when applying for the permit(s).

Permit scheme breach

A HGV found to be in breach of the permit scheme will be issued a Penalty Charge Notice (PCN) of up to £550 (reduced by 50 per cent if paid within 14 days). TfL also have the ability to revoke or suspend a permit if a vehicle that has been granted a permit is later found to be in breach of the permit conditions. These conditions will be clearly communicated during the online application process.

Step 1

Do you require a HGV safety permit?

- ◆ HGVs more than 12 tonnes GVW only (not cars, vans, buses or coaches)
- ◆ Enforced throughout the Greater London area (see map), 24 hours a day, seven days a week

See map of roads affected by the HGV safety permit scheme with enforcement taking place within the London-wide area.

A downloadable pdf version of the map is available on our website.

- ◆ Vehicles out of scope (12 tonnes GVW or more/less)

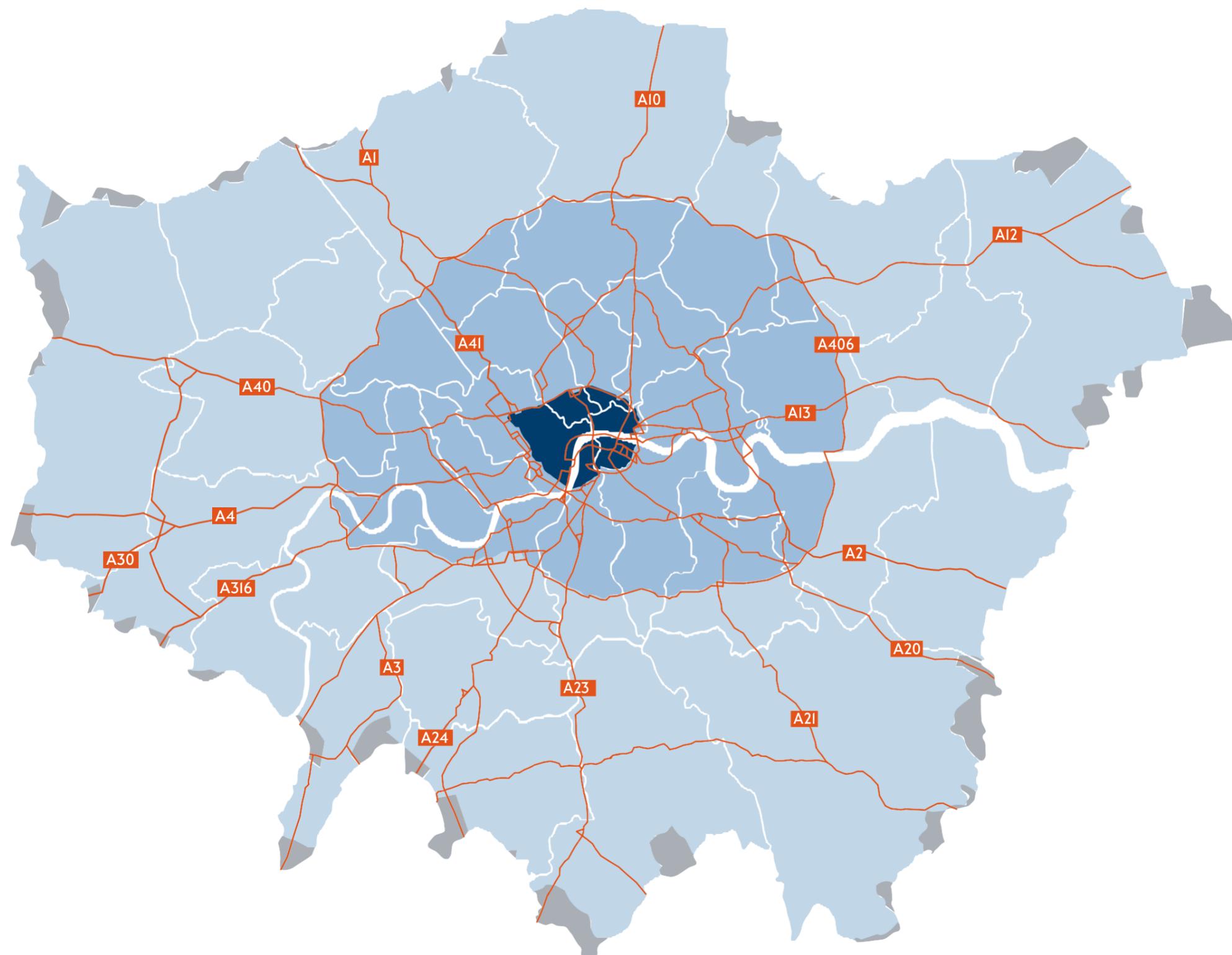


- ◆ Vehicles in scope (more than 12 tonnes GVW)



Key

Central London	■
Inner London	■
London-wide	■
GLA Boundary	■
Selected A Roads included in the LEZ	—



Step 2

Find out your direct vision star rating

- ◆ Check whether TfL holds a star rating for your vehicle tfl.gov.uk/direct-vision-permit
- ◆ If the star rating is not available, then phone or email your vehicle manufacturer with the VIN number of your HGV
- ◆ Vehicle manufacturer will advise the star rating
- ◆ Send us the star rating of your vehicle via the TfL contact page tfl.gov.uk/contact-dvs
- ◆ If zero star – see step 3
- ◆ If one to five star – see step 4



Step 3

Safe System requirements (Is your HGV rated zero star?)

- ◆ You will need to fit additional safety equipment – a ‘Safe System’ (see page 11)
- ◆ This includes:
 - » Class V and VI mirrors
 - » Sideguards
 - » Camera monitoring system
 - » Sensor system with driver alert
 - » Left-turn audible alarm
 - » Warning signage
- ◆ Once vehicle is fitted with equipment, apply for permit (step 4)



Step 4

Apply for your permit

- ◆ When ready, visit: tfl.gov.uk/direct-vision-permit to apply for a permit online
- ◆ Enter vehicle details (or multiple vehicles via a spreadsheet template) and check ratings
- ◆ Enter operator details
- ◆ Enter contact details
- ◆ If zero star
 - » Upload two photos of Safe System equipment
 - » Submit your application
 - » Application will be reviewed and accepted (permit issued) or rejected with reasons (re-apply)
- ◆ If one to five star – electronic permit will be granted



