

Direct Vision  
Standard



# PROGRESSIVE SAFE SYSTEM 2024



# MANTIS™



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## INTRODUCTION

From 28th October 2024 Transport for London require all HGV's exceeding 12 tonnes with a safety rating of 2 stars and below entering the Greater London Area to hold a valid certification under the Progressive Safe System (otherwise known as Direct Vision Standard 2024). These new guidelines are designed to aid in the Mayor of London's mission to eliminate all deaths and serious injuries on London's transport network by 2041.

MANTIS have carefully developed a future-facing connected vehicle CCTV camera kit which ensures compliance with the BSIS, MOIS & CMS requirements. We have created this document to help you understand key terminology better and assist in choosing the correct hardware for your fleet to ensure compliance and safety for you, your fleet and the public.



## What Defines a Heavy Goods Vehicle (HGV)?



Weight - exceeding 12 tonnes and designed principally for the transport of goods with the exception of passenger transport vehicles. Both articulated with trailer & rigid included

## What is a Vulnerable Road User (VRU)?



Anyone that is using the public highway and does not have protection from injury by their vehicles structural form.

Prominent examples include cyclists & motorcyclists. Pedestrians, horse riders, roller skaters and skateboarders also fall within the category

## What defines a KSI collision?

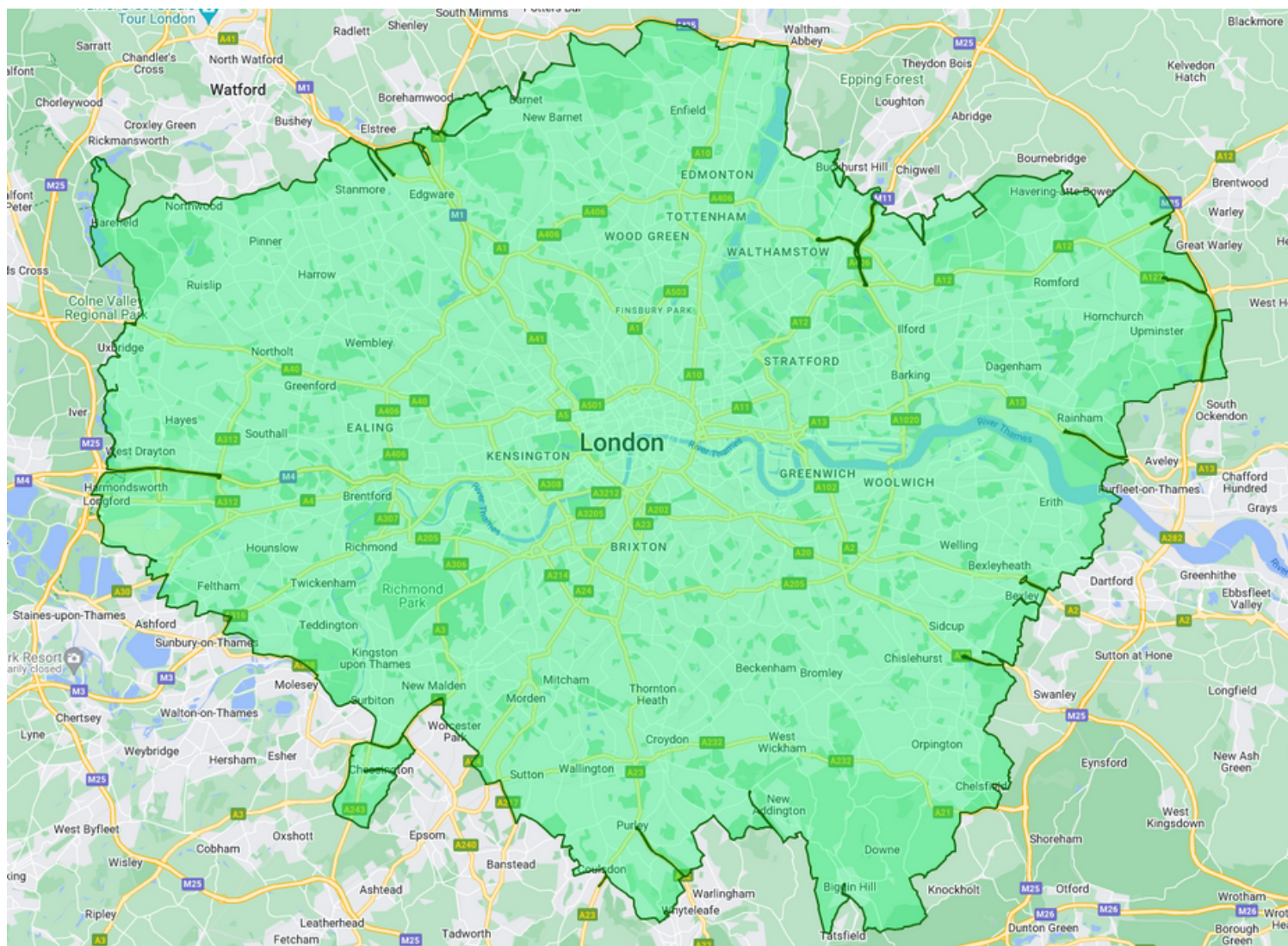


Killed - casualties that died at the scene, or within 30 days as a consequence of the collision

Seriously Injured - Injury resulting from the collision which was worse than cuts, bruises or whiplash. This can range from severe permanent injury / disability including broken bones & loss of limbs



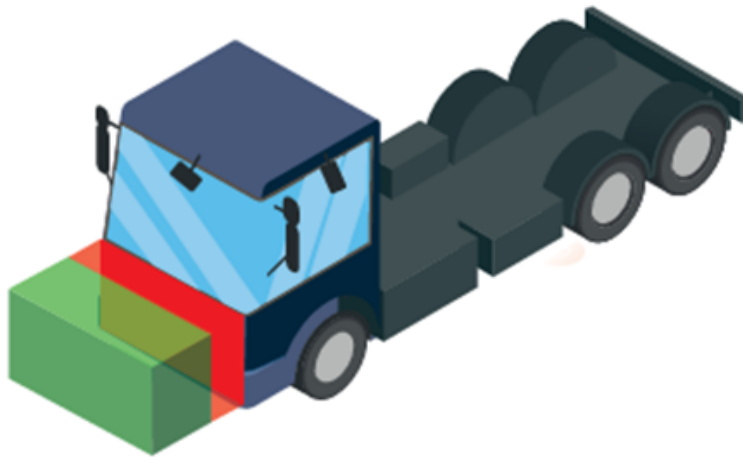
## Progressive Safe System - Greater London Area PSS will affect



## MOIS, BSIS & CMS Explained

### MOIS - Moving Off Information System

The blind spot at the front of an HGV cab has long presented a visibility issue for drivers- with the average height of an LGV cab sitting at 4.5m tall with 1.4m of blind spot, accounting for more than 25% of missing visibility.



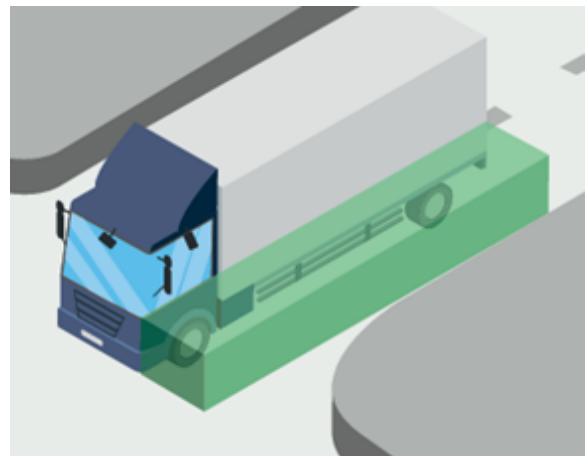
Accidents caused by blind-spots in the frontal zone of HGV's account for over 12% of all cyclist collisions and more than 40% of pedestrian collisions.

HGV's manufactured with a 2 star and below rating, or those not recognised as UNECE Regulation 151 & 159 compliant, are not designed nor equipped as standard to offer satisfactory vision directly in front of and below the cab under PSS regulations, requiring updated hardware to be installed on the frontside of the vehicle.

## MOIS, BSIS & CMS Explained

### **BSIS & CMS – Blind Spot Information System & Camera Monitoring System**

Pertaining to the near-side of any HGV, the new BSIS & CMS requirements have been designed to offer drivers visibility of the entire nearside of their cab and trailer.



More than 45% of cyclist collisions and 12% of pedestrian collisions are caused during a left-turn manoeuvre. Current reliance on mirrors is unsatisfactory in identifying static or moving VRU's on the nearside of a vehicle with many large blind spots still apparent and cause for a large percentage of left-turning incidents. Removal of these blind-spots with driver visibility offered through sensors and an in-cab video monitor are designed to significantly reduce near-side collisions and incidents

## MANTIS LIVE SOLUTION

The team at MANTIS Live have worked diligently since release of new TFL guidelines to curate a camera system that not only meets but exceeds requirements:

- **New AI cameras for MOIS, BOIS & CMS**, capable of differentiating between a VRU and static road furniture / vehicles, calibrated for each unique vehicle in your fleet by one of our UK wide expert engineers.
- **140 degree wide-angle lens cameras**, developed to minimise “fish-eye” and other associated distortion effects to deliver drivers a sharp at-a-glance image of their entire nearside.
- **In-cab warning system** with audible and visual warning that “speaks” to our cameras to only activate upon detection of a VRU or imminent collision - removing unnecessary and distracting alerts associated with static vehicles and road-side furniture.

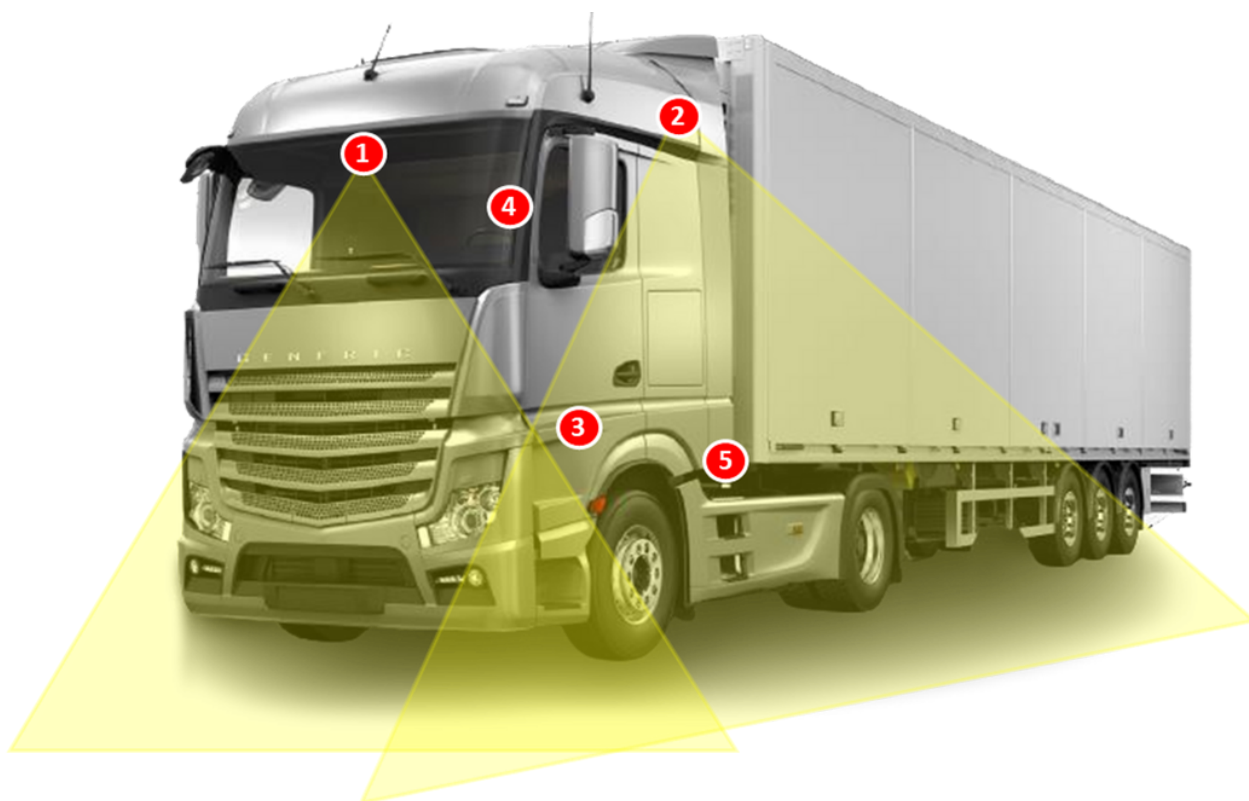
**Active Fault Reporting & Monitoring** - PSS requires the BSIS to permanently display, to the driver, an error in the event of restricted or faulty functionality of the unit or in the instance of malfunction.

The MANTIS solution goes above and beyond compliance, with a daily health report sent to nominated users outlining any potential issues with the camera system.



## MANTIS LIVE SOLUTION

- **External Left-hand turn audible warning** - An audible warning activated during a left-turn to warn VRU's of a drivers intended move.




1   
AI MOIS &  
Forward Cam

2   
AI BSIS  
Nearside Cam

3   
AI BSIS  
Nearside Cam

4   
In-cab Alert

5   
Left-hand  
Turn Alarm



## MANTIS LIVE SOLUTION - GOING BEYOND COMPLIANCE

- **Connected CCTV** - We can't, and no-one can, guarantee an incident free journey. VRU's and other drivers behaviour play a factor in the safety of your drivers & fleets. In the unfortunate instance of an incident many HGV drivers face the reality of "guilty until proven innocent". MANTIS Live are market-leading experts in connected CCTV solutions, auto-uploading video clips of harsh braking, left-hand turns and collisions to a proprietary **Evidence Centre** solution, allowing fleet operators to instantly access video evidence online
- **No limit on video download length** - Removing the headache of 10 second limits, requiring large data usage and extensive time spent to identify an incident, MANTIS allow unlimited download length on-demand.
- **Cutting-Edge Connectivity Solutions** - Our market-leading connectivity solutions encompass true multi-network M2M 4G data sims, offering unparalleled versatility by seamlessly accessing all major networks and automatically roaming onto the strongest signal. This ensures the most stable and reliable coverage for your operations.
- **Adaptable data allowance**- With our flexible data allowance of 1GB aggregated packages, you can effortlessly share data among your entire fleet, eliminating concerns about running out of data when you need it most or incurring exorbitant overage fees.



## KEY QUESTIONS

- **Has your solution been certified by TFL as being compliant?**
  - PSS is a self-certification exercise, the engineer who carries out the installation must supply a “sensor functionality statement” as part of every vehicles certification request confirming the installed kit matches TFL’s technical specifications. As part of our service, MANTIS, via our OEM, supply this statement for all customers via our partners
- **Can I see an example of an installation?**
  - Of course! Please get in touch with our Channel Manager below who would be happy to send you images of installations we have already completed - plus feedback from customers themselves.
- **The TFL regulations ask for sensors and only 1 camera - how does MANTIS work with 3 cameras and no sensors?**
  - The MANTIS AI cameras ARE your sensors! Each camera is calibrated to TFL requirements and not only displays an image of the near-side and front-side of an HGV, but act as sensors to deliver audible warnings to the driver.





**STILL UNCERTAIN? GET IN TOUCH, WE'D LOVE TO HELP**

Sean Panebianco - Channel Manager MANTIS Live



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