



Regulating Vehicle Access for improved Livability

An Overview Of London's existing and planned schemes and how they ensure compliance

Morgan Dye 08 June 2021



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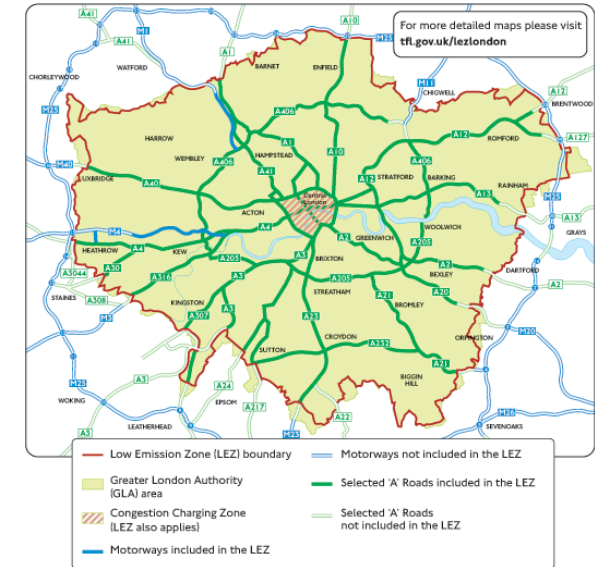




Overview of London schemes

- We currently have three core charging schemes in London: Congestion Charge, Low Emission Zone (LEZ) and the Ultra Low Emission Zone (ULEZ)
- The Congestion Charge and ULEZ are focused across the same area in central London
- The LEZ is a Londonwide scheme
- Since March 2020 we have also had the London-wide Direct Vision Standard to improve HGV safety
- From October 2021 the ULEZ will be expanded to cover a larger area of what is known as Inner London, between the North and South Circular roads
- Current schemes are broadly enforced in the same way using Automatic Number Plate Recognition (ANPR) cameras
- This presentation provides an overview of how these schemes operate, enforcement techniques and future schemes we are exploring in London

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Congestion Charge

- The Congestion Charge has operated in London since February 2003, but has changed over the years
- Today it currently operates between 7am and 10pm seven days a week, the charge is currently £15
- The Congestion Charge is enforced using ANPR cameras at the boundary to the zone with Penalty Charge Notices (PCN) issued for non-payment
- Vehicle registration numbers are observed by around 650 cameras on 200 poles at 175 sites, covering all entry and exit points and within the zone
- 650,000 images are captured and processed every charging day (or were before the pandemic) - cameras have integrated ANPR technology
- The ANPR cameras link through to the Driver and Vehicle Licensing Authority (DVLA) database which compares number plates to vehicles. It can then be determined if a vehicle has paid the charge
- Signs placed at the 277 entry and exit points of the zone, and up to 17 miles away on main arteries into London
- There is a comprehensive network of road markings, both on the zone boundaries and within the zone

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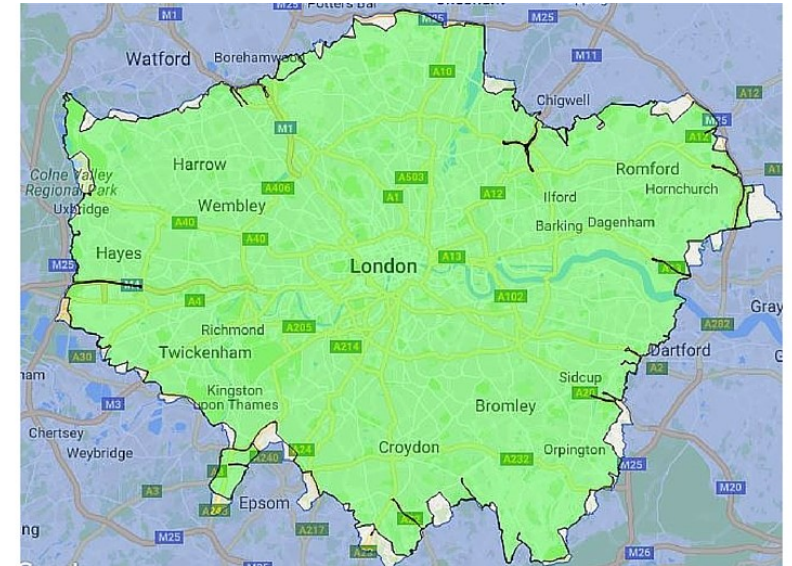


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LEZ

- The Low Emission Zone operates London-wide, 24hrs a day, every day of the year since 2008. Started with HGV only, then added larger vans
- Vehicles need to meet the required emission standards or they will be issued with a PCN – fines range from £500 - £2000 depending on vehicle type, weight and emissions
- All roads within Greater London, those at Heathrow and parts of the M1 and M4 are included. However, the M25 is not included (even where it passes within the GLA boundary).
- The LEZ is enforced by ANPR cameras which record a vehicles number plate when they enter the zone
- The ANPR cameras link through to the DVLA database which compares number plates to vehicles
- Most vehicles do not need to register with TfL, but some do, including some overseas registered vehicles – this includes vehicles registered with TfL as not being compliant but which can be proved otherwise or if you are a showman with a specially modified vehicle
- The entry points to the zone are marked by signs around the boundary and in the lead up to it

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ULEZ

- ULEZ operates 24hrs a day seven days a week (except 25th December) since 2019
- Vehicles that don't meet the required emission standard are required to pay to drive in the zone - £12.50 for most vehicles and £100 for heavier vehicles
- The zone is due to expand in October this year to cover a much larger area (see map)
- Enforcement is very similar to the Congestion Charge and current scheme covers the same zone
- The scheme is enforced using ANPR cameras at the boundary of the zone – vehicles not meeting the standard and not paying the required charge will be issued with a PCN

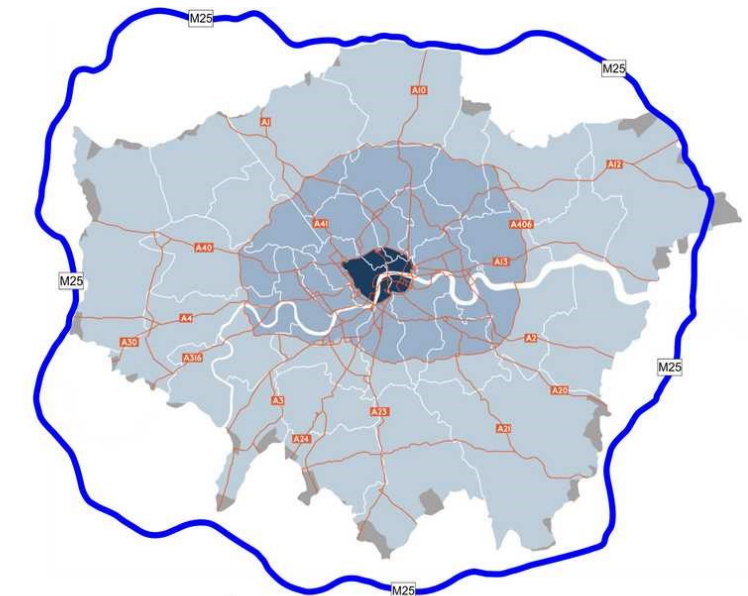




Direct Vision Standard & HGV Safety Permits

- Since 2020 the Direct Vision Standard (DVS) and safety permit for heavy goods vehicles (HGVs) requires operators of lorries over 12 tonnes gross vehicle weight to obtain a safety permit before entering and operating in most of Greater London
- The Direct Vision Standard measures how much an HGV driver can see directly through their cab windows. This indicates the level of risk to vulnerable road users, such as people walking and cycling, near the vehicle
- Whether or not the operator considers the vehicle to meet the standards, all lorries over 12 tonnes (GVW) entering or operating in Greater London need to hold a valid HGV safety permit before using the area to avoid receiving a PCN
- The scheme covers the same area as the Low Emission Zone and is enforced via the same cameras

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Key	
Central London	Dark Blue
Inner London	Medium Blue
London-wide	Light Blue
GLA Boundary	Blue Line
Selected Roads included in the DVS	Red Line
M25 not included in the DVS	Blue Line

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London Lorry Control Scheme

- Scheme has operated since 1985 and controls the movement of HGVs through London
- It operates at night and on weekends on specific roads in London and is based on vehicle weight as opposed to emissions – vehicles over 18 tonnes
- Scheme is in place under a London-wide Traffic Order and is enforced using the London Local Authorities and Transport for London Act 2003
- It is enforced on-street by a team of Enforcement Officers
- London Councils manages the scheme on behalf of London's boroughs, the City of London and TfL
- Scheme is managed via a permit system with operators having to gain permission to operate on restricted roads when the scheme is in force
- If an operator does not have a permit and uses a restricted road during the hours of operation of the scheme then they will be issued with a PCN

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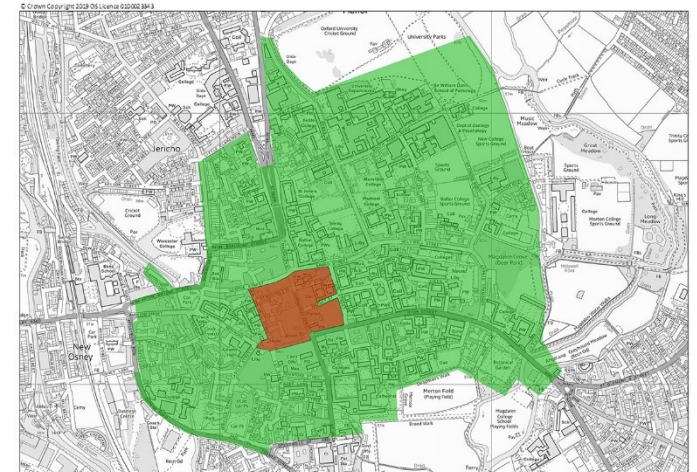




Looking forward: ZEZs

- Zero Emission Zones are a new type of scheme for London
- There are only two schemes of this type currently in operation
- Both are enforced via ANPR cameras like London's other charging schemes with PCNs issued to non-compliant vehicles
- ZEZs could take a variety of forms, but the intention is that vehicles that are zero emission at tailpipe will be able to enter the zone, whilst those that are not would be fined for doing so
- As some vehicles are already Zero Emission Capable (ZEC / plug-in-hybrid), particularly black cabs, we may need to look at other approaches to enforcement such as geofencing
- Geofencing would potentially force ZEC vehicles into zero emission mode when entering the zone
- This would not only help drivers avoid a possible fine, but would also ensure ZEC vehicles are producing emissions in a ZEZ and make it easier for heavy duty vehicles to make compliant deliveries

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The reasons for our technology choices

- The Congestion Charge was the first scheme to be introduced and adopted ANPR technology which fitted well with the nature of the scheme and wider use in the UK more generally
- ANPR tech enabled a link through to DVLA databases for checking if vehicles had paid the charge and was able to deal with the high number of vehicles passing into the zone on a daily basis
- Other tech, such as tag and beacon, is less widely used in the UK (used on some river crossings and some stretches of toll motorway) – this would have required a large sign-up operation due to volume of vehicles entering the zone from in London and UK-wide – however, autopay system is in place for those that register
- CCZ tech set the standard for future schemes as tech that was already in place could be used or new cameras linked to existing back-office functions
- LEZ, ULEZ, DVS and ULEX all use same ANPR tech and link to DVLA databases
- Likely that any future large-scale ZEZ schemes would use similar tech, especially if in central London where extensive camera network is in place – however existence of ZEC vehicles does raise case for a possible geofencing scheme

Further information

- London is a world leader in these type of schemes and future plans around the expansion of the ULEZ and ZEZs means we're continuing to develop our thinking
- Further information TfL-led schemes can be found on our website:
<https://tfl.gov.uk/modes/driving/>
- London Council's host more information on the London Lorry Control Scheme:
<https://www.londoncouncils.gov.uk/services/london-lorry-control>
- Further information on ZEZs, including our soon to be re-freshed ZEZ guidance, can be found here: <https://tfl.gov.uk/info-for/boroughs-and-communities/zero-emission-zones>
- Details on the ReVeAL project, and London's involvement, can be found here: <https://civitas-reveal.eu/resources-overview/publications/guidances/>

Thank you for your attention

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