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Organization: Transport for London

Title/Position: Congestion Charging

Complementary Measures Manager

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Steve Kearns has worked for Transport for London for the past 12 years, including seven years on the Central London Congestion Charging project. His job involved managing the concept, design and implementation of traffic and transportation measures to support the Charging scheme.

From 2008-2012 he worked in Transport for London's Technology Delivery Group, promoting new technology initiatives such as trialing reservations of on-street booking facilities for freight vehicles and usage of electronic devices for traffic management purposes.

Prior to working for Transport for London he spent 15 years as a transport planner in local authorities and community organizations in London where major projects included promoting the new Cross rail link and preparing the transport and business case for international rail station at Stratford, East London (used extensively during 2012 Olympic Games).

He has a Master of Science degree in Transport Planning from University of Westminster, is a member of the Chartered Institute of Highways and Transportation and also a member of the European Union's ITS Urban Experts Group.







## **London's transport problems**





## Westminster Bridge – End of 19<sup>th</sup> Century

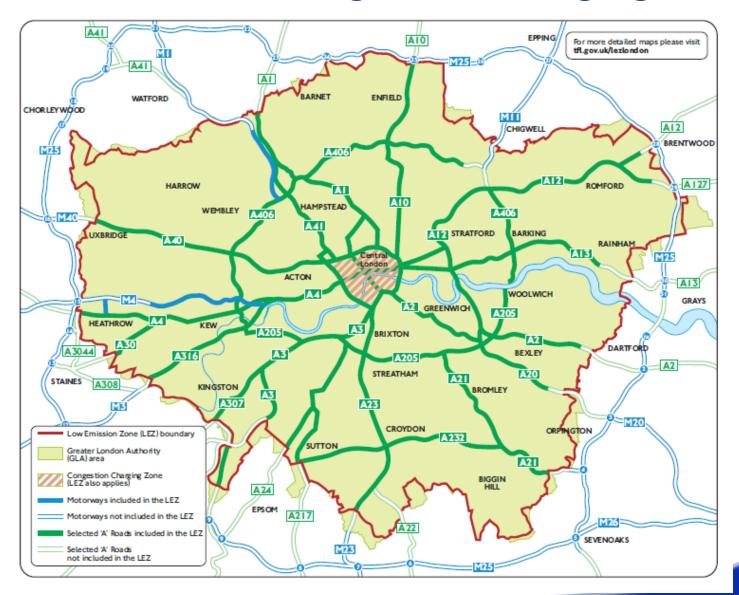


## Why was Congestion Charging necessary?

- Despite 85% public transport usage, vehicular traffic major problem
- 185,000 cars entered central London each day
- Central London most congested area in UK; traffic speeds <9mph</li>
- Congestion persisted throughout the day
- Congestion cost London an estimated £2 billion
- To address this, area-based charging scheme introduced in central London in February 2003
- Objectives of scheme:
  - Reduce traffic and traffic congestion
  - Raise revenue to re-invest in transport.

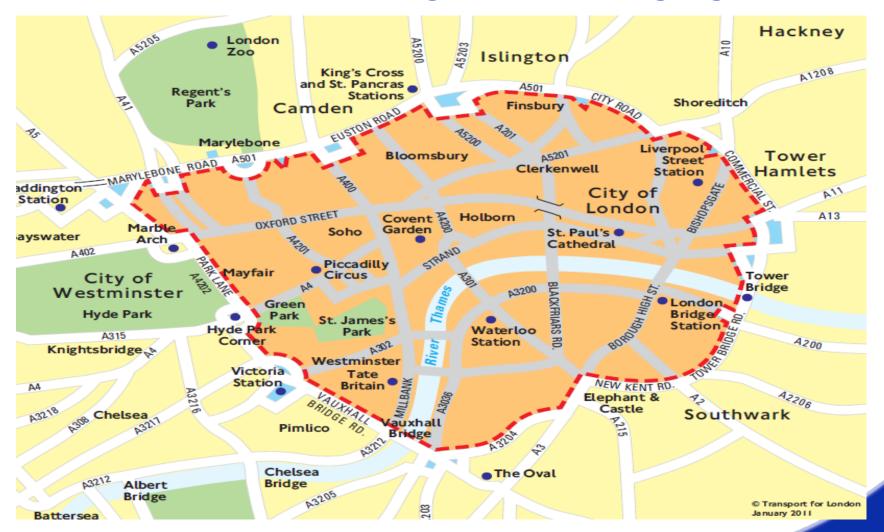


## **Central London Congestion Charging Zone**





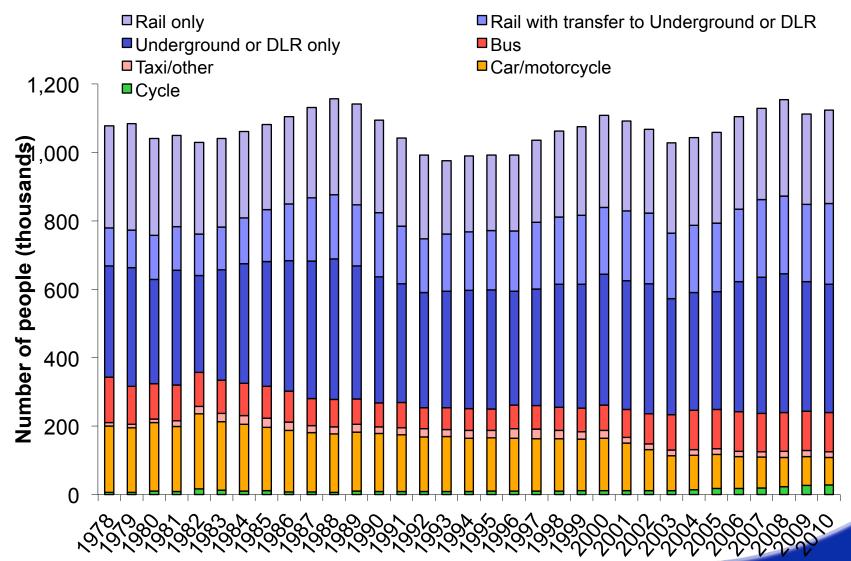
## **Central London Congestion Charging Zone**





## People entering central London

Weekday morning peak





### **Camera enforcement**





## **Traffic impacts of Congestion Charging**

#### Central zone

- 25% reduction in traffic (4 or more wheels) entering the zone
   has remained constant
- 70,000 fewer vehicles per day
- Bus patronage up, bus services performing better
- Little change in trips to central area with 50-60% moving to public transport





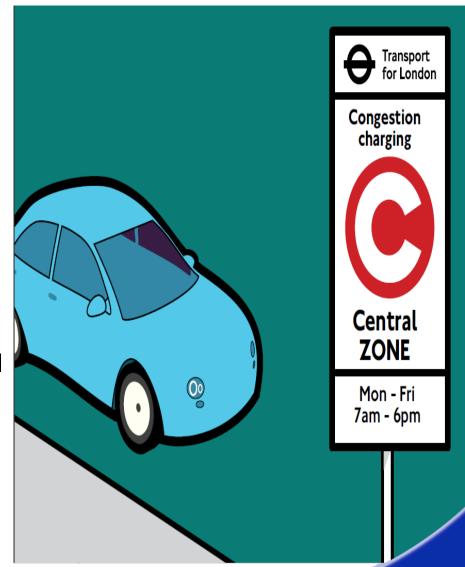
## **Operations and Enforcement**



## **Charge Payment**

- Monday Friday, 7am 6pm
- £10 on the day of travel
- £12 on the charging day after travel
- £9 for customers on CC Auto Pay
- Daily, weekly, monthly or annual payment for individual vehicle registration number







## **Payment Channels**

- Pay online at <u>www.cclondon.com</u>
- Pay by mobile phone text message
- Pay at selected shops and petrol stations
- Pay by phone on 0845 900 1234
- Pay by post
- CC Auto Pay
- Fleet Auto Pay

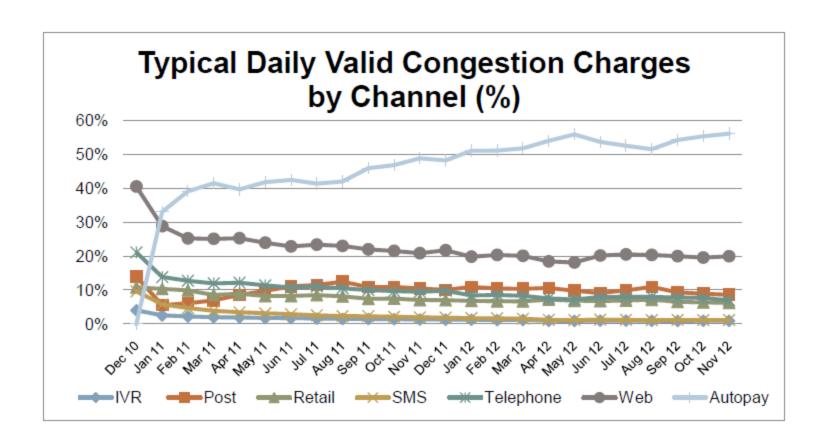




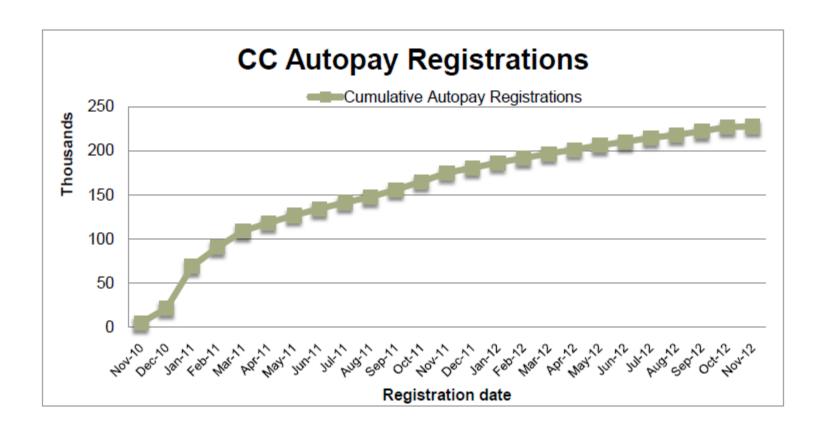




## **Charge Transactions by Channel 2010-12**









## **Exemptions and Discounts**

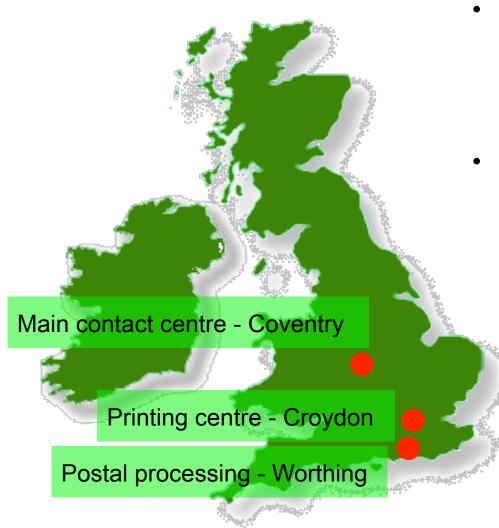
- Buses, coaches & minibuses
- Licensed minicabs & taxis
- Motorbikes, mopeds & cycles
- Military vehicles
- Emergency service vehicles
- Operational vehicles used by Local Authorities in Zone
- Breakdown and recovery vehicles

- Greener vehicle discount (<100g/km CO2 & Euro 5)</li>
- Electric & plug-in hybrid vehicles
- Disabled persons
- NHS (Health) reimbursement for patients and some staff
- Residents of Zone 90% discount

Exempt and discounted vehicles account for c.50% of traffic in Zone.



## **Customer Services (IBM)**



- Since November 2009, IBM have run CC & LEZ schemes, including contact centre and enforcement processing
- Dedicated contact centre based in Coventry handles all calls and correspondence in relation to the scheme
  - Open 6am to 12.30am during week and reduced hours at weekends
  - Handles c. 8,000 calls a day during working week.



### **Enforcement**

- Signs placed at 165 Zone entry and exit points, and up to 17 miles away on main roads into London
- Comprehensive network of road markings exist on Zone boundary and within zone
- Vehicle registration numbers are observed by 650 cameras at 180 sites, covering entry/exit points and within zone
- Circa one million images captured and processed every charging day cameras linked to Automatic Number Plate recognition (ANPR) technology
- If valid payment is not received for vehicle for the date of travel, the enforcement process commences....

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## **Penalty Charge Checking and Issue**

- Images and key data for <u>every</u> possible Penalty Charge are manually checked before issue
- Number plate, and make and model of vehicle advised by DVLA, are matched against image
- Any 'mismatch' is rejected for further investigation or deletion
- Daily Penalty Charge Notice (PCN) of £130 issued to registered keeper.



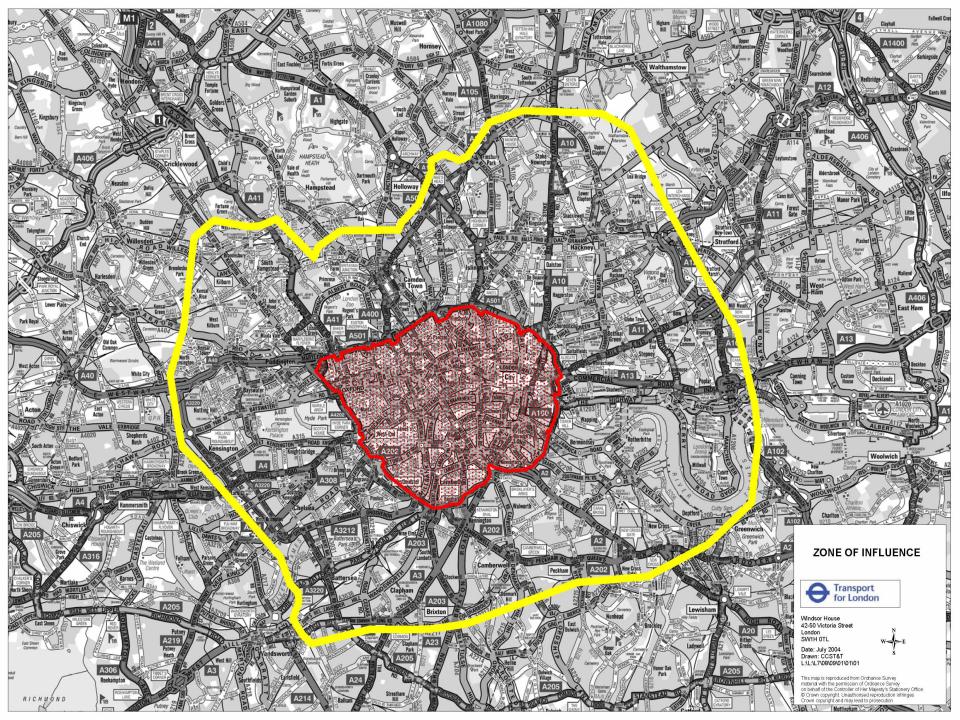


### **Complementary Transport Measures**

Introduction of scheme accompanied by measures designed to make public transport and other alternatives to car travel easier, cheaper, faster and more reliable:

- Substantial increase in bus capacity into and around Zone
- Freeze in public transport fares
- Better information for public transport users
- Frequency improvements on train & Underground services into Zone





# **Complementary Traffic Management Measures**

- Traffic management measures on diversion routes and roads around Zone.
  - Road Closures: Discouragement of rat running
  - One way streets
  - Controlled Parking Zones: Inner and Outer London
  - 20 mph zones
  - Rescheduling capital works programmes
  - Bus Priority Measures
  - Increased CCTV coverage



## COMPLEMENTARY MEASURES PROGRAMME – ORIGINAL ZONE

COMPLEMENTARY MEASURES	NUMBER OF SCHEMES	COST (£MILLION)	
Traffic Management Schemes	51	7.1	
Home Zones / 20 mph zones	49	13.3	
CPZs (Inner Area)	34	6.9	
CPZs (Outer Area)	53	3.3	
Capital Works on TfL Roads	27	22.2	
Traffic Signal Schemes	53	2.5	
Soft Measures	22	2.9	
TOTAL	261	58.0	













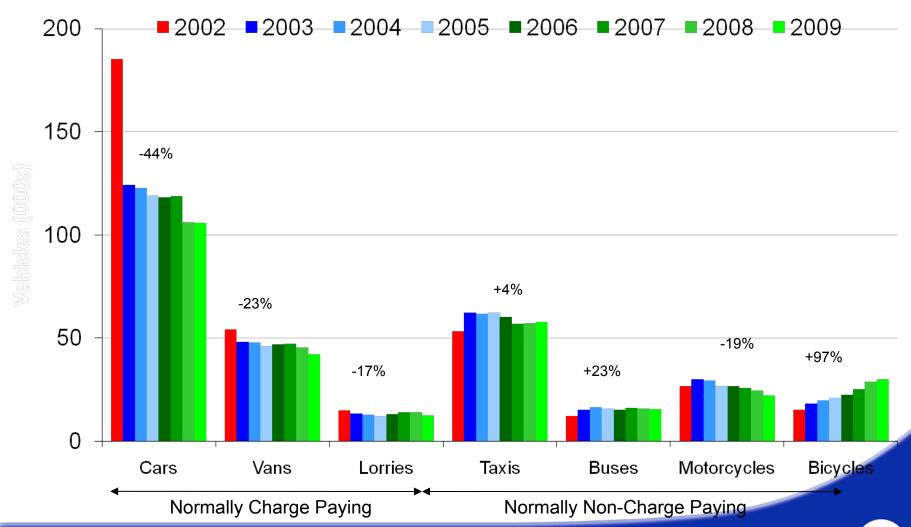




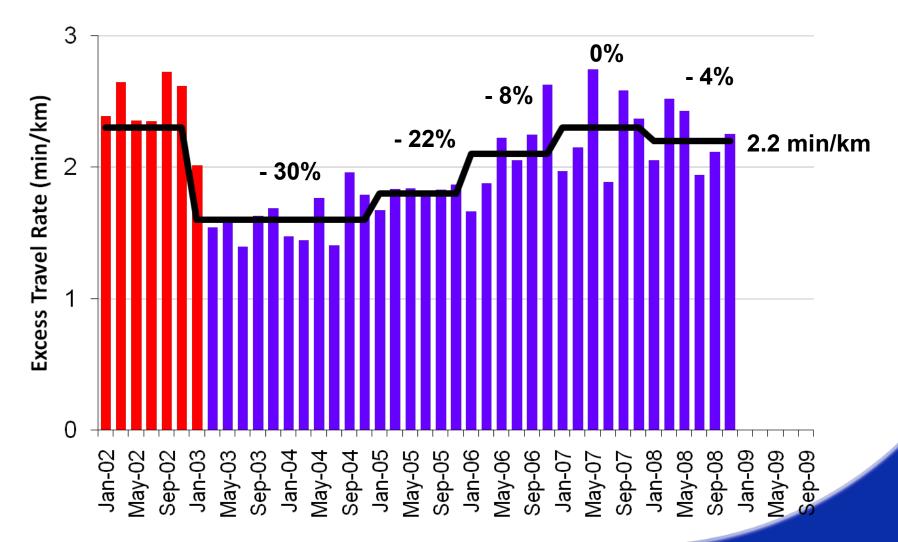
## **Scheme Impacts**



# Average daily traffic entering Charging Zone\* 2002 - 2009



# Traffic congestion levels in Charging Zone 2002 - 2009





## **Changes to Congestion Charging**

#### Schedule of changes to the Congestion Charge

Change to the scheme	Date
PCN increase from £120 to £130	Monday 20 May 2013
Closure of the GVD and EVD to	
new registrations; start of sunset	
period for existing recipients*	Friday 28 June 2013
Introduction of Ultra Low	
Emission Discount	Monday 1 July 2013
Retail payment channel closure	Friday 26 July 2013



<sup>\*</sup>GVD sunset period is for 3 years until 24 June 2016, Vehicles registered for the Electric Vehicle Discount will be automatically transferred to the new ULED on 1 July 2013.

## **Proposed Changes to Vehicle Discounts**

Eligible vehicles	Qualifying criteria	
Pure electric vehicles	Electric cars, vans, lorries or quadricycles that run solely on batteries. Eligible vehicles will have the fuel type recorded as 'electric' on the V5C car registration document issued by the DVLA or be exempt from Vehicle Excise Duty because they are electrically propelled vehicles.	
Ultra low emission cars	Passenger cars that emit less than 75g/km of CO2, as recorded on the V5C car registration document, and meet the Euro 5 emissions standard.	
Ultra low emission vans	Vans (light goods vehicles not exceeding 3.5 tonnes) that emit 75g/km or less of CO2 and meet the Euro 5 emissions standard.	
*Motorcycles do not pay the Congestion Charge		



## **Other Impacts**



- Economy
  - Broadly neutral impact overall on business
- Environment
  - Congestion Charging directly responsible for reductions of traffic emissions inside Zone equating to 8% of NO<sub>x</sub>, 7% of PM<sub>10</sub> and 16% of CO<sub>2</sub>
- Road safety
  - Reduced numbers of cars have led to less personal injury road accidents in the central zone
- Net revenues
  - In 2010/11 Congestion Charging raised £169 million to be spent on other transport initiatives within London.



### **Scheme Costs and Revenues**

- Scheme cost some £150m to introduce in 2003, including complementary measures and impacts monitoring
- Under previous scheme operator (Capita), Scheme cost some
   £90m to operate each year
- Under current scheme operator (IBM), Scheme costs some
   £45m to operate each year
- Scheme has consistently made a surplus (net revenue), which by law has to be spent on transport improvements in London
- In 2006/07, net revenues were some £123m
- In 2011/12, net revenues were some £137m
- Over its 10 years of operation, Scheme has generated over £1bn in net revenues.



### **Use of Scheme Revenues**

 In 2011/12, Scheme generated net revenues of £180.6m, which were spent by TfL as follows:

#### **Bus Network Improvements**

£106m

Contributions to major enhancements of London's bus garages, stations, stops and shelters; to bus priority and real-time travel information

### Roads & Bridges

£13m

Contributions to programmes to improve quality of street conditions, including reconstructing / resurfacing streets and footways, and strengthening structures

### **Road Safety**

£1m

Contributions to measures to reduce road casualties

### **Walking & Cycling**

£3m

Contributions to programmes for improvements for pedestrians and cyclists

#### **Borough Plans**

£9m

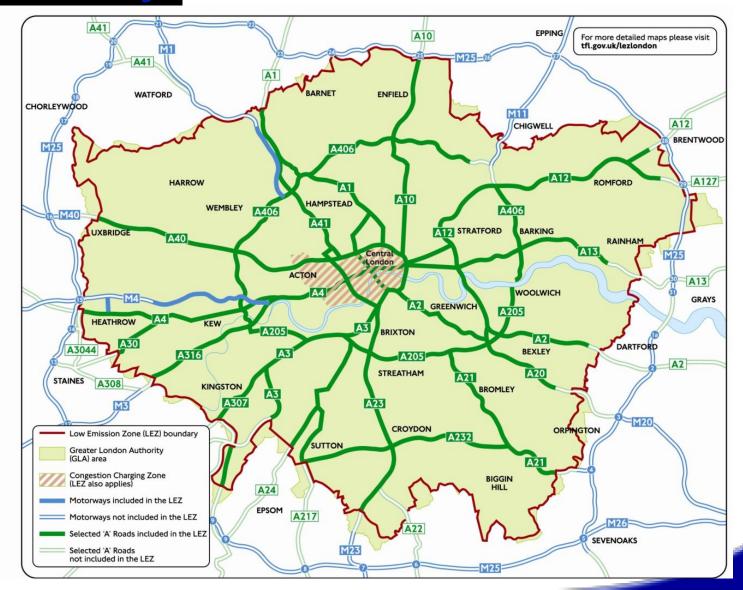
TfL works in partnership with the London boroughs providing funding for a range of transport projects

TOTAL

£132m



## **LEZ Boundary**



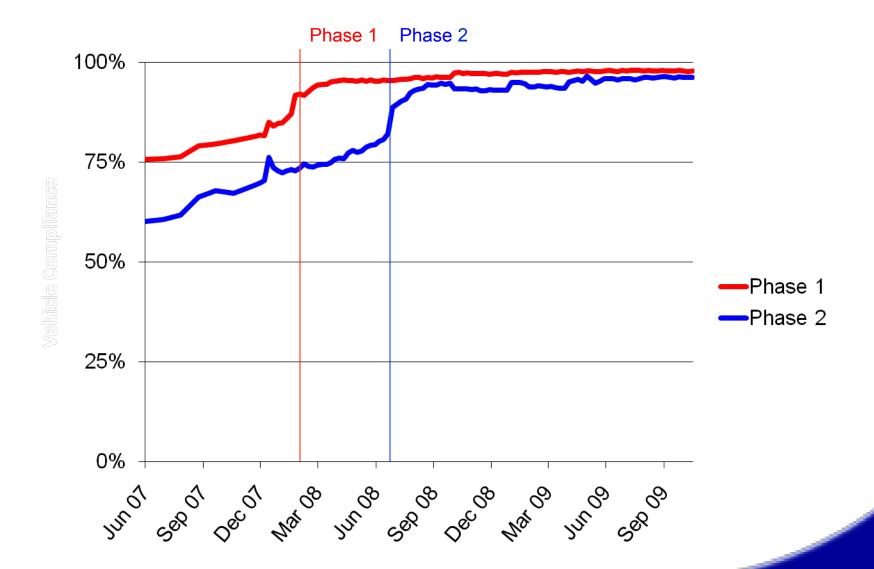


### **LEZ** definitions and standards

Vehicle type and definitions	Date of LEZ scheme implementation	Emission standard (for PM) required to drive in the LEZ at no charge
Heavier lorries - Goods vehicles exceeding 12t	Feb 2008	Euro III
Lighter lorries - Goods vehicles between 3.5 and 12t	Jul 2008	Euro III
Buses and coaches - Passenger vehicles with more than eight seats plus the driver's seat and exceeding 5t	Jul 2008	Euro III



### **Low Emission Zone compliance**





## **Key Lessons Learned**



## **Lessons from Congestion Charging**

- Political commitment is key
- Effective research and clear policy objectives
- Extensive public consultation and stakeholder engagement
- Strong project and contract management
- Good public transport alternatives
- Effective traffic management (especially just outside boundary)
- Strong public information campaign
- Need to listen to customers and be prepared to make changes / improvements





