

# **URBAN CONGESTION AND EMISSION BASED CHARGING – AN OVERVIEW OF DEVELOPMENTS IN THE UK**

**ITS in Europe 2007  
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Aalborg 18-20 June**

# Current Situation in the UK

- 60 million people
- > 30 million cars on the road
- Chronic Congestion in city centres and congestion hotspots on the inter-urban network.
- Transport demand is mainly local and is concentrated within urban areas and their surrounding catchment areas.
  - ◆ 69% of business journeys and 84% of commuter journeys are shorter than 25km;
  - ◆ 55% of the 30 million commuters journeys are destined for large urban areas;
  - ◆ > 31% of freight vehicle kilometres are in urban areas.
  - ◆ > 52% of business journeys start or end in the 22 largest urban areas.



# Emissions from Road Transport

- **Road transport contributes approximately 25% of UK's overall greenhouse gas emissions**
- **Emissions impact on long-term economic growth by contributing to global climate change**
- **Transport needs to play an important role in an economy-wide response to that challenge**
- **New EC directive for air pollution (PM<sub>10</sub>) forces European Cities to take measures to reduce the traffic**
- **This will result in an increased interest for Congestion Charging Systems.**

# Existing Powers and Legislation

## ■ **Transport Act 2000**

- ◆ Enabling powers to Local Traffic Authorities to introduce Congestion Charging or Workplace Parking Levy schemes
- ◆ Anticipated that 20 cities would introduce congestion charging schemes by 2010

## ■ **Statutory Instrument 2007 No. 58 (12<sup>th</sup> February 2007)**

- ◆ The Road Tolling (Interoperability of Electronic Road User Charging and Road Tolling Systems) Regulations 2007
- ◆ Mandates the use of one of three technologies for new electronic toll schemes in UK
  - a) satellite positioning;
  - b) mobile communications using the GSM-GPRS standard (reference GSM TS03.60/23.060);
  - c) 5.8 gigahertz microwave technology.

## ■ **Draft Road Transport Bill (May 2007)**

# Current Electronic Charging Schemes in UK



## ■ Tolled Infrastructure

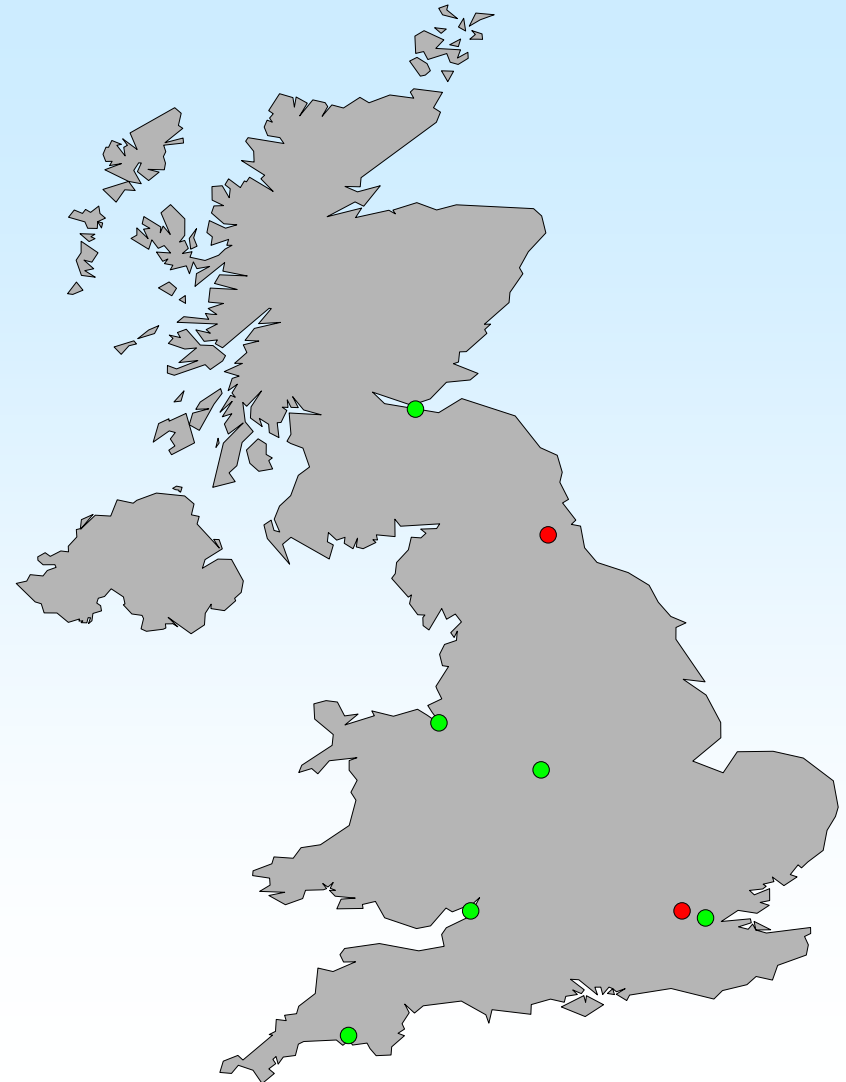
- ◆ Dartford Crossing
- ◆ M6-Toll
- ◆ Forth Road Bridge
- ◆ Tamar Crossing & Torpoint Ferry
- ◆ Severn Crossing
- ◆ Mersey Tunnels

## ■ Congestion Charging Schemes

- ◆ Durham
- ◆ London Congestion Charging

## ■ Statistics

- ◆ < 1% equipped vehicles
- ◆ << 1% road network subject to Congestion Charge or Toll



# The Urban Challenge

- Aesthetic impact
- Chaotic traffic
- Diversity of road users
- Highly variable topology
- Challenging installation
- Interference
- Health and safety
- Wider policy context



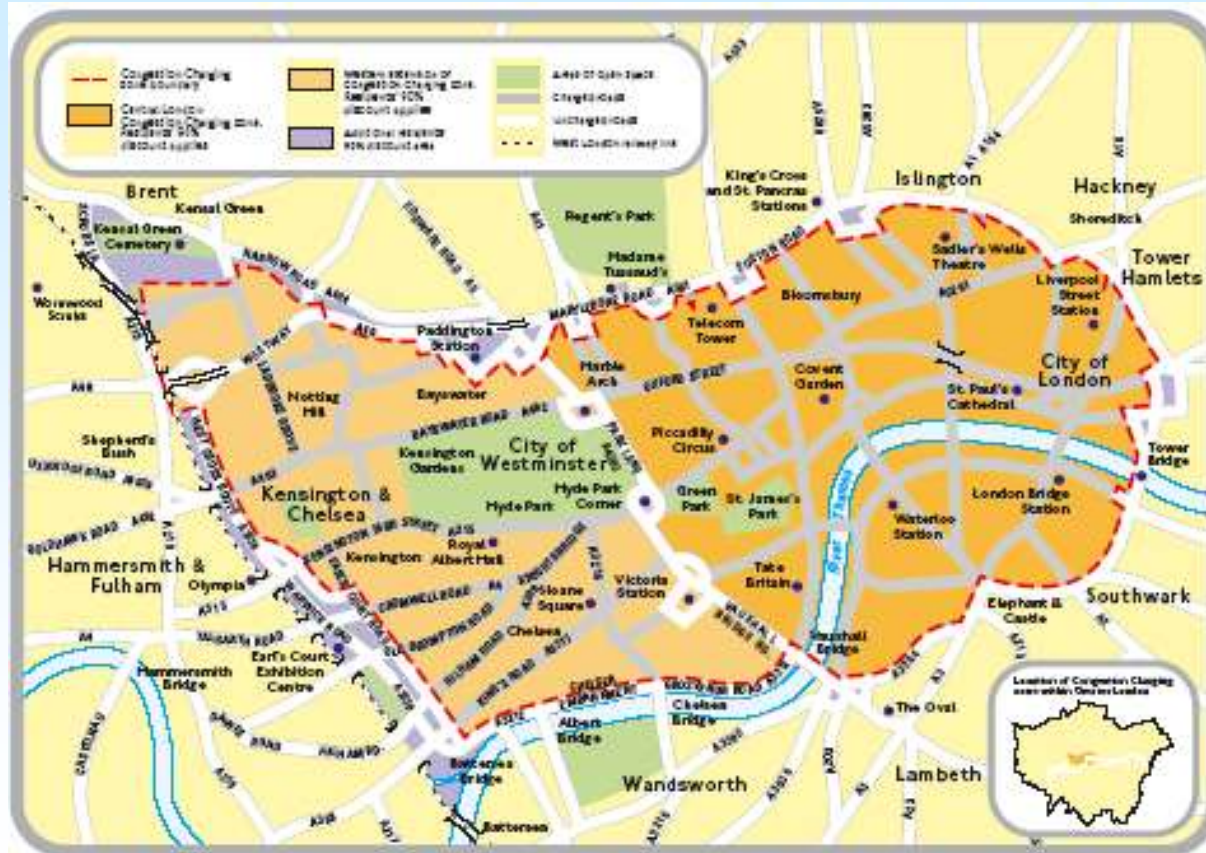
# Durham

- **October 2002 - 1<sup>st</sup> city to introduce a congestion charging scheme under the provisions of the Transport Act 2000.**
- **Single road access charge £2.**
  
- **Scheme impacts in the first 9 months of operation**
  - ◆ 85% reduction in vehicular traffic
  - ◆ 10% increase in pedestrian activity
  - ◆ 48% reduction in the number of delivery vehicles entering between 9.00 am and 5.15pm.
  - ◆ 21% increase in number of people who believe the Road User Charge is a good idea.



# London - eCLOCCS

- Original Scheme introduced in February 2003
- Western Extension introduced in February 2007



# London Congestion Charging Impacts

## ■ Objectives

- ◆ to reduce congestion in Central London
- ◆ to increase public transport use in the central area by 1-2%
- ◆ to raise £1.3 billion over the first 10 years for re-investment in all forms of transport in London

## ■ The scheme has had the following impacts:-

- ◆ In 1<sup>st</sup> year of operation
  - 15% reduction in circulating traffic in zone
  - 18% reduction in vehicles entering zone in charging hours

### Emissions in 2005

- NO<sub>x</sub> emissions 13% less than 2002
- total PM<sub>10</sub> emissions 15% less than 2002
- ◆ Net revenues to date- greater than £390M

# **Future UK Congestion & Emissions Charging Schemes**

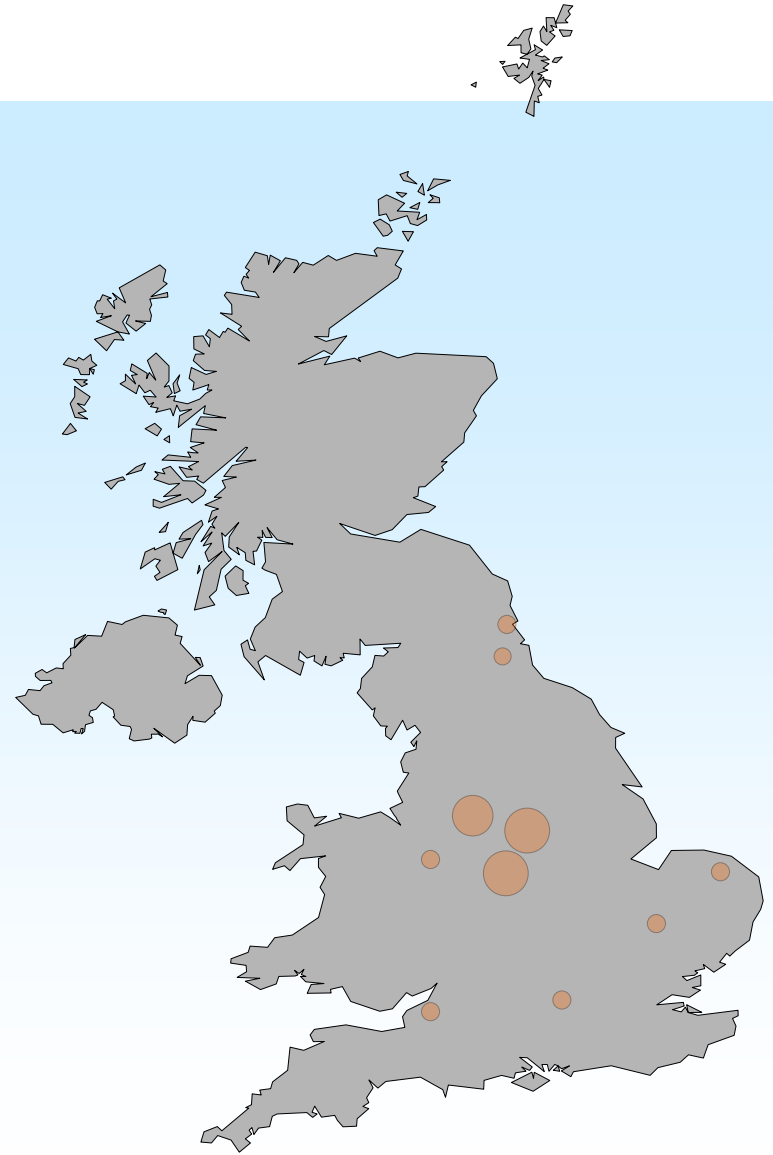
# London – Low Emission Zone

- The aim of the Low Emission Zone (LEZ) is to improve air quality in London by deterring the most polluting vehicles from being driven in the area.
- Vehicles that do not meet the required emissions standards will be required to pay a daily charge
- £200 for lorries and £100 large vans and minibuses
- Operational from 4<sup>th</sup> February 2008
- 24 hours, 7 days a week



# Transport Innovation Fund

- In July 2005, £18 million was made available to assist the preparation of TIF Bids.
- TIF 'pump priming' funding available for three years, to support TIF bids where road pricing is a major element.
- TIF
  - ◆ £290 million available in 2008-09
  - ◆ £2.5 billion by 2014-15.
- The fund offers substantial, long term investment and will support smarter and better management of the capacity that already exists.



# Common TIF Pump Priming Activities

- **Identifying & understanding local congestion problems (now and in future)**
- **Identification of congestion management scheme options**
- **Feasibility assessment of scheme options**
- **Stakeholder and public consultation**
- **Business Case preparation**

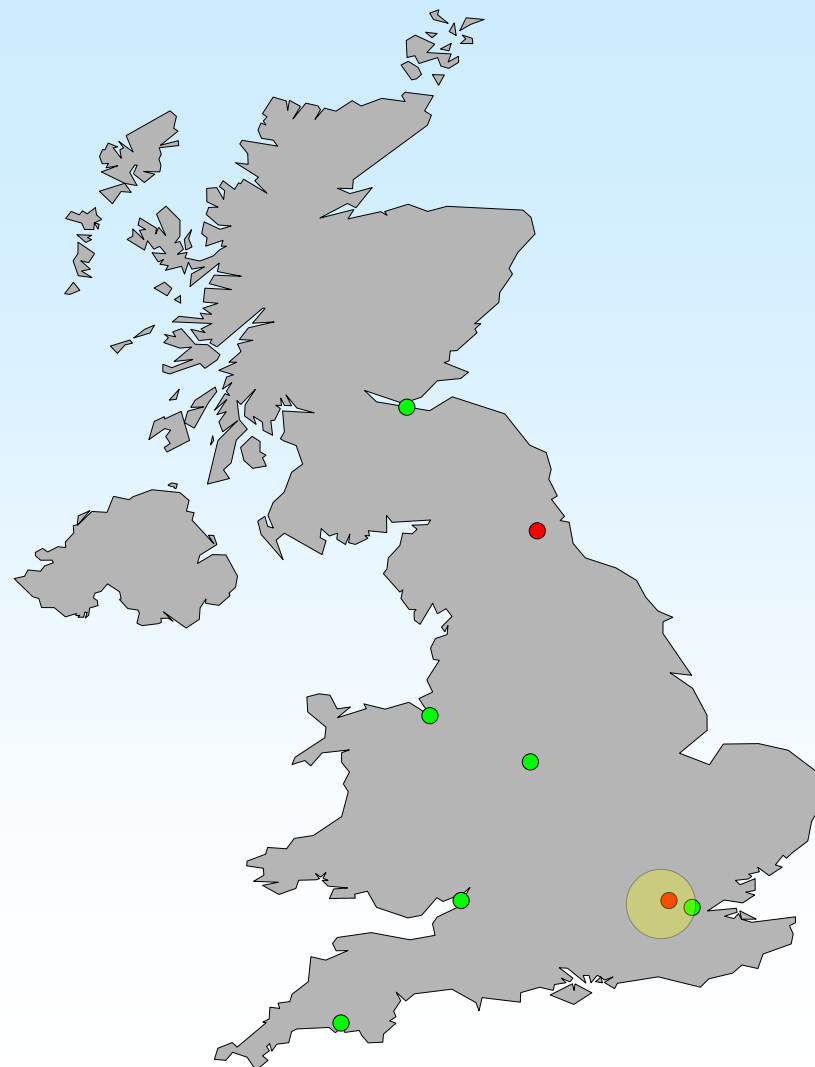
# Greater Manchester

- **25<sup>th</sup> May 2007 - consultation on the proposed TIF bid for a £3bn package of transport funding and the introduction of a road congestion charging system.**
- **July 2007 – Possible Submission of TIF bid to DfT**
  - ◆ Dependent on meeting 4 self-imposed tests
- **Draft Scheme Details**
  - ◆ Charges on the 15 arterial routes into the regional centre
  - ◆ Charge for crossing inner and outer cordons
  - ◆ Proposed Charging Hours 07:30 – 09:30 and 16:00 – 18:30
  - ◆ Tag & Beacon Technology
  - ◆ ANPR for enforcement
  - ◆ Earliest Start Date - Autumn 2012

# The Scheme Acceptability Challenge



- **Clear Policy and Objectives**
- **Support for economic growth and development**
- **Business Community Support**
- **Public support**
  
- **Congestion Charging Schemes unlikely to be acceptable in isolation**
  
- **Integrated packages of investment required**



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