

## Case Study: Lothian Buses 'Auld, but not Reekie'

Lothian Buses, the largest provider of bus services in Edinburgh, has been working with emissions specialist Eminox to reduce particulate matter (PM) and nitrogen oxides (NOx) pollution from their buses.

Lothian Buses runs a modern bus fleet with a significant number of 4 to 6 year-old buses at Euro III standard, these are not due for replacement for a number of years. Virtually all Edinburgh's buses pass through the city's Air Quality Management Areas, so although the vehicles are in excellent condition their emissions needed to be cut. New buses would be an expensive solution which would not be environmentally prudent as the buses had not reached the end of their usable life.

Lothian Buses came to Eminox looking for an alternative solution which would be cost effective and environmentally effective. Since 1978, Eminox has designed and manufactured specialist exhaust systems.

The Eminox SCRT® system combines CRT (Continuously Regenerating Trap) with SCR (Selective Catalytic Reduction) technology in a compact exhaust unit. The combined system reduces PM by more than 90% and NOx by almost 70%, also virtually eliminating hydrocarbons and carbon monoxide.

To prove that the system could deliver NOx reduction in the challenging urban operating conditions of Edinburgh, a trial bus was fitted with a NOx sensor which could measure real time NOx reduction – this demonstrated consistent NOx reduction of more than 70% in the real world.

As a result, Lothian have already upgraded 43 buses including Volvos Dennis Darts and even a Route Master. These older buses now meet emissions levels equivalent to Euro V and in some cases EEV (Enhanced Environmentally Friendly Vehicle) standard.

8 of the upgraded buses have been put to work on service 36 – which operates between Ocean Terminal and Holyrood. The service 36 passes through a number of highly environmentally sensitive areas including the Old and New Town of Edinburgh UNESCO World Heritage site, the Royal Mile, Princes Street and Holyrood Park, and was specifically selected to maximize the benefits of reducing air pollution in key areas.

The upgraded buses that now meet or beat today's emissions standards, have delivered significant reduction in key air pollutants on environmentally sensitive routes, they are branded 'Auld but not Reekie'.

