

**THE IMPACT OF ROAD TRAFFIC ON THE URBAN AIR QUALITY: A
MODELLING AND AN EXPERIMENTAL APPROACH**

**C.BORREGO^{1,2}, A.I.MIRANDA¹, M.COUTINHO², A.M.COSTA¹, P. GOMES² and C.
RIBEIRO²**

¹ Department of Environment and Planning,

² IDAD - Institute for Environment and Development
University of Aveiro, 3810-193 AVEIRO, Portugal

ABSTRACT

The main purpose of this work is to evaluate the impact of road traffic emissions on the air quality of a Portuguese urban centre, the city of Aveiro, which is usually assumed as non-polluted area due to its good dispersion conditions and to its medium size. A Gaussian model was applied aiming to simulate the dispersion of air pollutants in the Aveiro Municipality. This modelling study was complemented with the measurement of air pollutant concentrations during a summer period, in a regular weekday and in the “European Car Free Day” when road traffic was suspended in the city centre. Both, modelling and monitoring approaches, allowed verifying the significance of road traffic emissions on the Aveiro's air quality.