

AN ASSESSMENT OF THE POTENTIAL REDUCTION OF AIR POLLUTION EMISSIONS FROM BUSES

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The Greater Manchester Atmospheric Emissions Inventory (EMIGMA) covers an area of 1552 km², encompassing the ten administrative districts of Greater Manchester and Warrington. The database allows the magnitude and spatial distribution of emissions across Greater Manchester and Warrington to be investigated, and enables the relative importance of different sources of air pollution to be examined. The EMIGMA inventory estimates bus emissions to contribute approximately 3% of annual NO_x and 1% of PM₁₀ emissions within the whole of the inventory area. However, a recent source apportionment study has indicated that close to the urban centre, buses can contribute as much as 50% of NO_x and up to 11% of total PM₁₀ road related emissions. Within the inventory area, air quality standard exceedances are mainly related to road traffic. This has resulted in a greater emphasis being placed upon public transport as a means of reducing urban air pollution, thus the proportion of emissions from buses could become more significant in the future. This paper is based on a study undertaken for the Greater Manchester Passenger Transport Executive (GMPTE), which aims to establish a more accurate estimate of bus emissions, and provide an assessment of the potential reduction of air pollution emissions from buses via end of pipe and replacement vehicle policies. This paper presents the background to the study, the methodology, results and recommendations for future work.