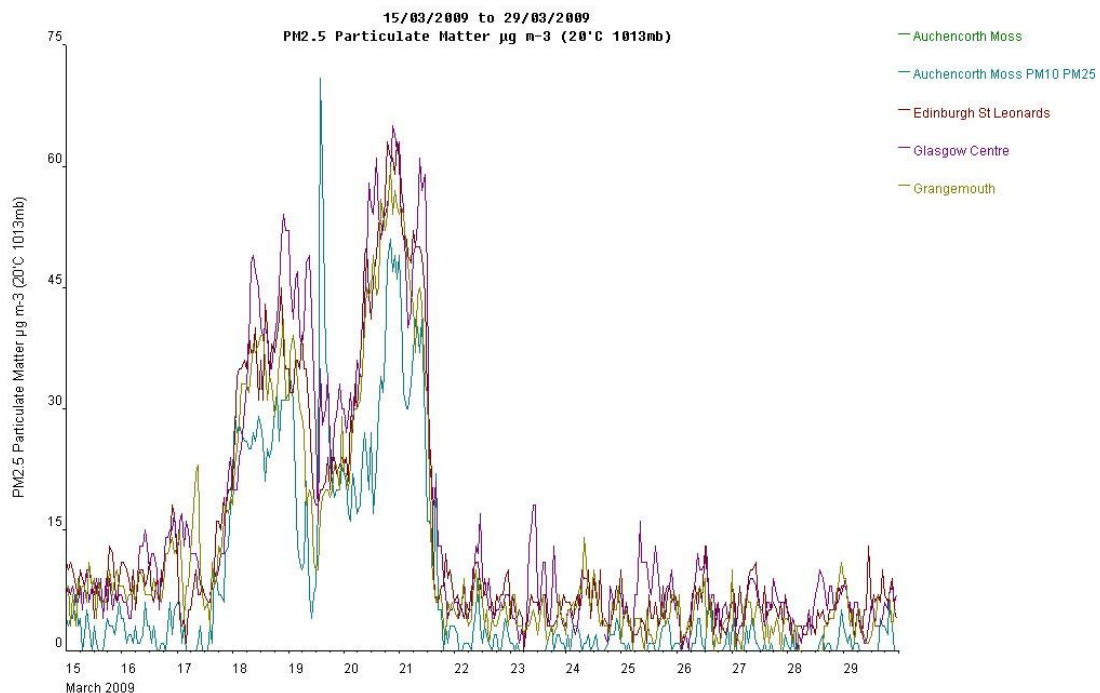
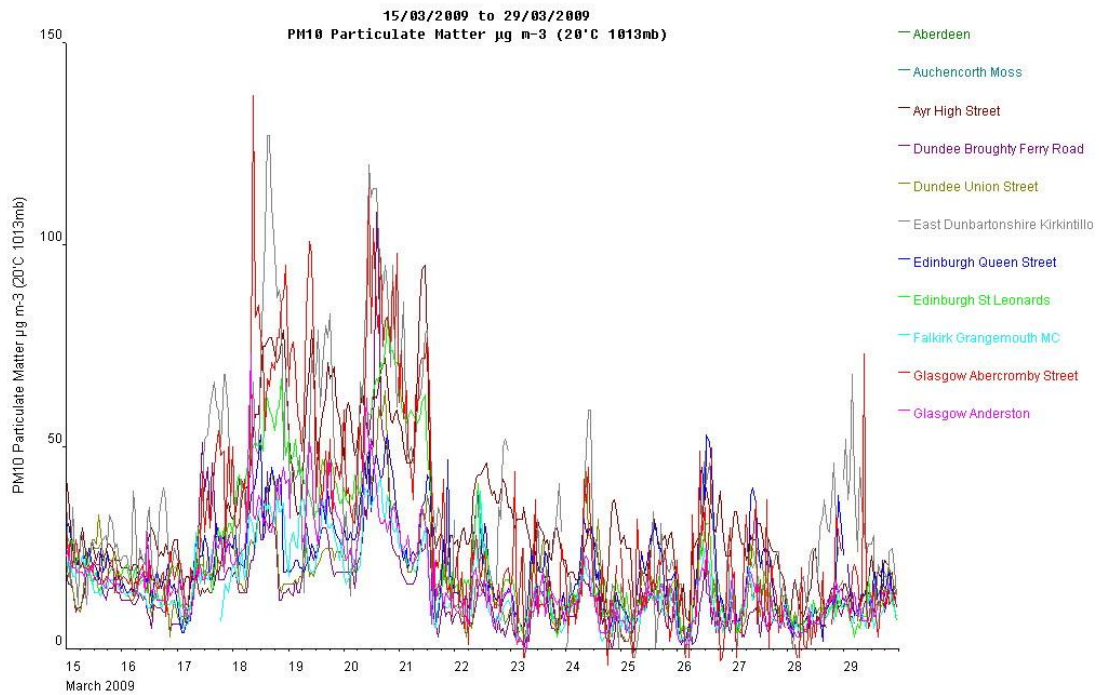


## Widespread Increase in Particulate concentrations March 17 – 21<sup>st</sup> 2009

During the recent spell of warm weather many of you will have noticed that visibility was fairly poor with a distinct haze being observed across both urban and rural areas of Scotland.

Our analysis of measurements from the Scottish Air Quality Database has shown that this coincided with a large increase in measured PM<sub>10</sub> and PM<sub>2.5</sub> concentrations, as illustrated in the graphs below.

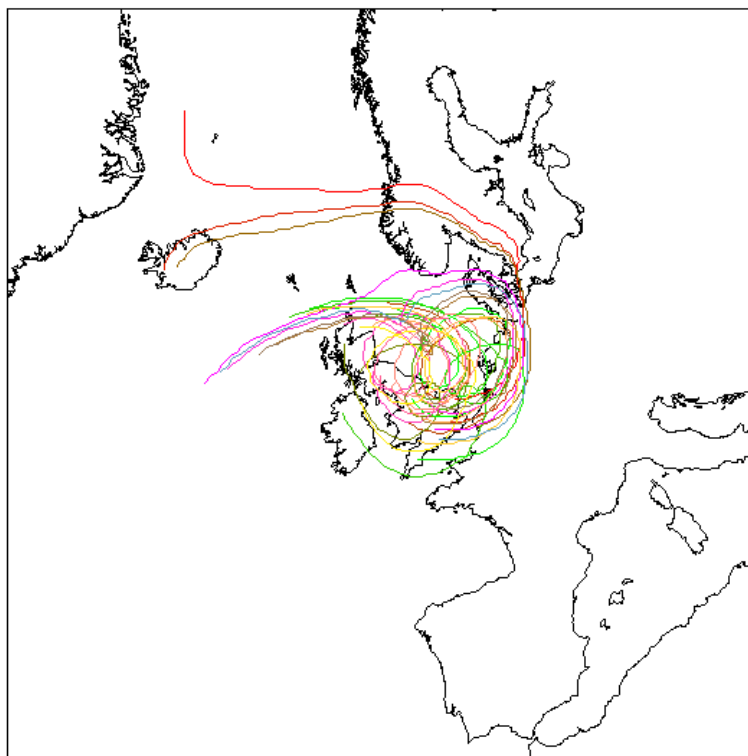


Over half of the PM<sub>10</sub> monitoring sites in the Scottish Air Quality Database database recorded an exceedence of the 50 µg<sup>-3</sup> daily mean objective during this period. Ten monitoring stations recorded 3 or 4 days with exceedences, which will be significant for those local authorities close to exceeding the PM<sub>10</sub> daily mean objective. Source apportionment for this episode is therefore very important for Local Air Quality Management purposes.

A large proportion of the PM<sub>10</sub> particulates (18-20 µg<sup>-3</sup>) were measured as being in the volatile fraction – a clear indication that they were most likely to be particulate nitrate from long-range transport of pollution. Sure enough our analysis of the air sources - as illustrated below - shows that the air reaching Scotland was circulating round from Northern Europe and southern England, probably bringing this particulate pollution with it.

This incident was widespread across the UK, not only affecting Scotland, but most parts of England and Wales as well.

Air mass back trajectories for 96 hours  
upto 12:00 Friday 20-03-2009



96-hour Air Mass back-trajectory plot