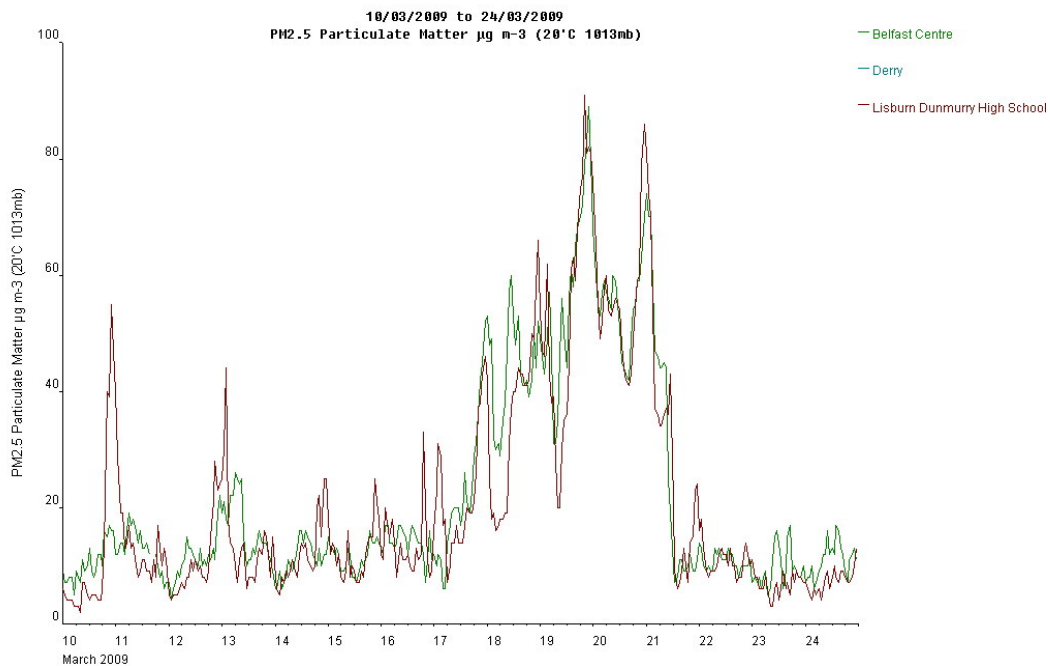
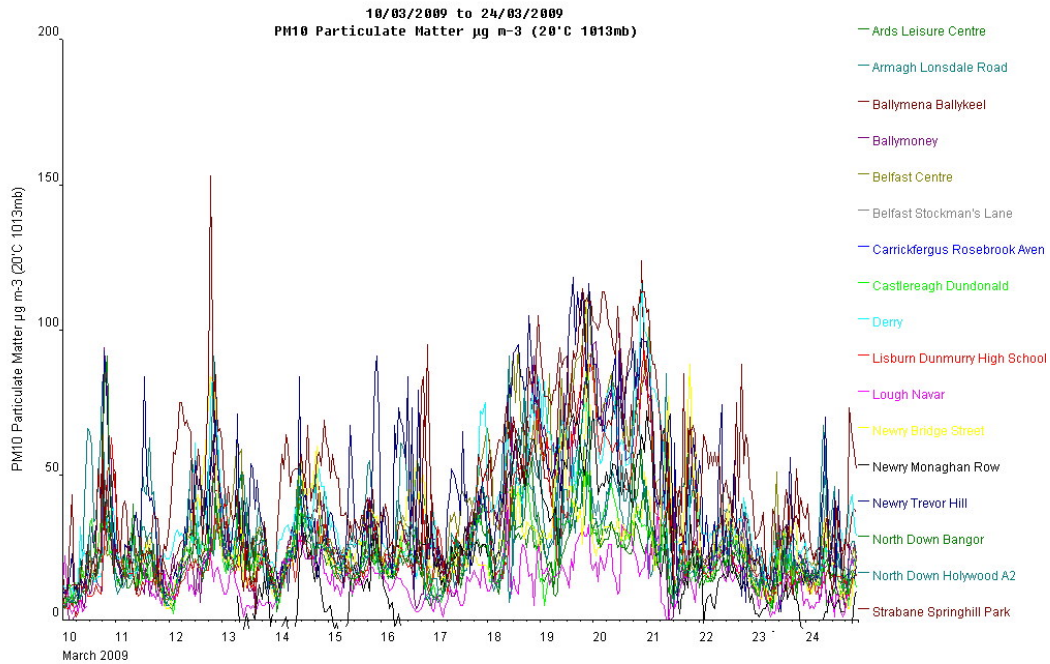


Widespread Increase in Particulate concentrations March 17 – 21st 2009

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 Northern Ireland.

Our analysis of measurements from the Northern Ireland Air Quality Database has shown that this coincided with a significant increase in measured PM₁₀ and PM_{2.5} concentrations, as illustrated in the graphs below.

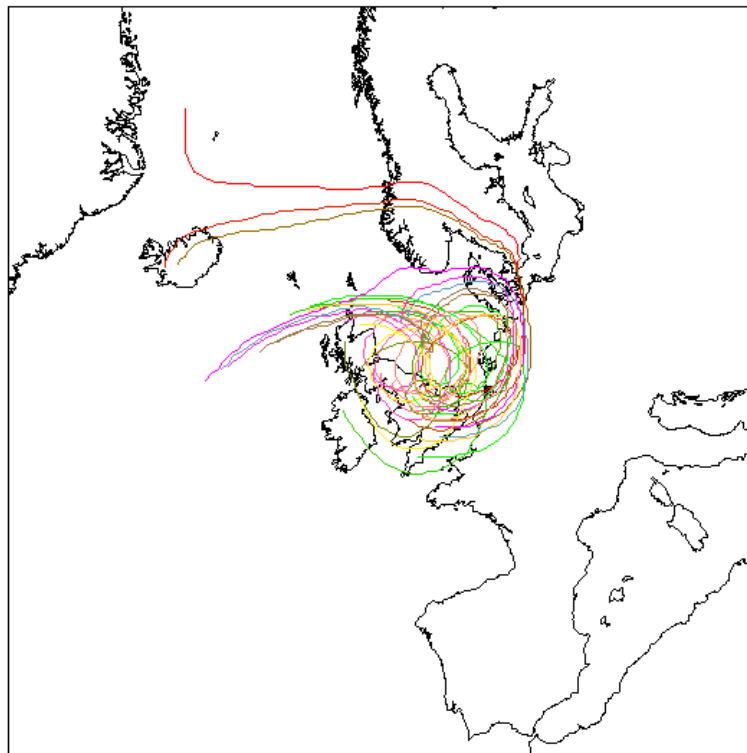


Over half of the PM₁₀ monitoring sites in the Northern Ireland Air Quality Database database recorded an exceedence of the 50 µg⁻³ daily mean objective during this period. Six monitoring stations recorded 3 or 4 days with exceedences, which will be significant for those local authorities close to exceeding the PM₁₀ daily mean objective. Source apportionment for this episode is therefore very important for Local Air Quality Management purposes.

A large proportion of the PM₁₀ particulates (18-20 µg⁻³) 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 Northern Ireland was circulating round from Northern Europe, southern England and Wales, probably bringing this particulate pollution with it.

This incident was widespread across the UK, not only affecting Northern Ireland, but most parts of England, Scotland 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