Assessment data comparison: PM_{10} concentrations at Horn Lane compared with reported Marylebone Road measurements and UK Pollution Climate Mapping Modelled data

Monitoring data from two stations in London and maximum modelled concentrations in London from the Pollution Climate Mapping model have been compared for 5 years. The data show that Horn Lane records a greater number of days exceeding the PM_{10} daily mean limit value than the maximum modelled and monitored data in all 5 years. The figures in red show the years and assessments which indicate an exceedence of the PM_{10} daily mean limit value. Exceedences occur in all years in the Horn Lane data and in the modelled data. The data show that the number of days exceeding the daily mean limit of 50 μgm^3 is decreasing at Horn Lane and in the maximum modelled number of days. The trend at Marylebone Road is less clear.

Table 1: Assessment Data comparison – Number of Days exceeding 50µg/m³ PM_{10}

Assessment method	Daily mean PM_{10}: number of days >50µg/m³				
	2008	2009	2010	2011	*2012*
Horn Lane (VCM corrected TEOM)	96	73	93	61	*53*
Marylebone Road FDMS (UK-AIR)	-	-	22	57	*23*
Marylebone Road (VCM Corrected TEOM (UK-AIR))	*57*	*35*	-	-	-
Highest modelled PM_{10} concn in London	62	62	51	54	-

Notes: 1) The modelled data are based on a statistical relationship from the annual mean, rather than being modelled on a daily basis. 2) The Monitoring method at Marylebone Road was changed in 2009, hence why these data are split over two rows. 3) No modelled data is yet available for 2012. 4) Sea salt has not been subtracted from these figures. 5) 2010 data have since been updated. 6) 2012 data are provisional.

These data are graphed below.

Figure 1: Comparison of London Assessments against the Daily Mean PM_{10} Limit Value

If natural sources were to be subtracted from these figures the results would be as set out in Table 2. All assessment results still show an exceedence of the daily mean limit value for PM_{10}. A time extension was in force until June 2011 for this metric.

Table 2: Assesment Data corrected for natural sources.

Assessment method	**Number of days daily Mean PM_{10} > 50 µg/m^3**			
	2008	2009	2010	2011
Highest modelled PM_{10} concn in London (minus sea salt)	46	46	37	48
Horn Lane (measured minus sea salt)	85	62	84	55

[redacted] January 2013