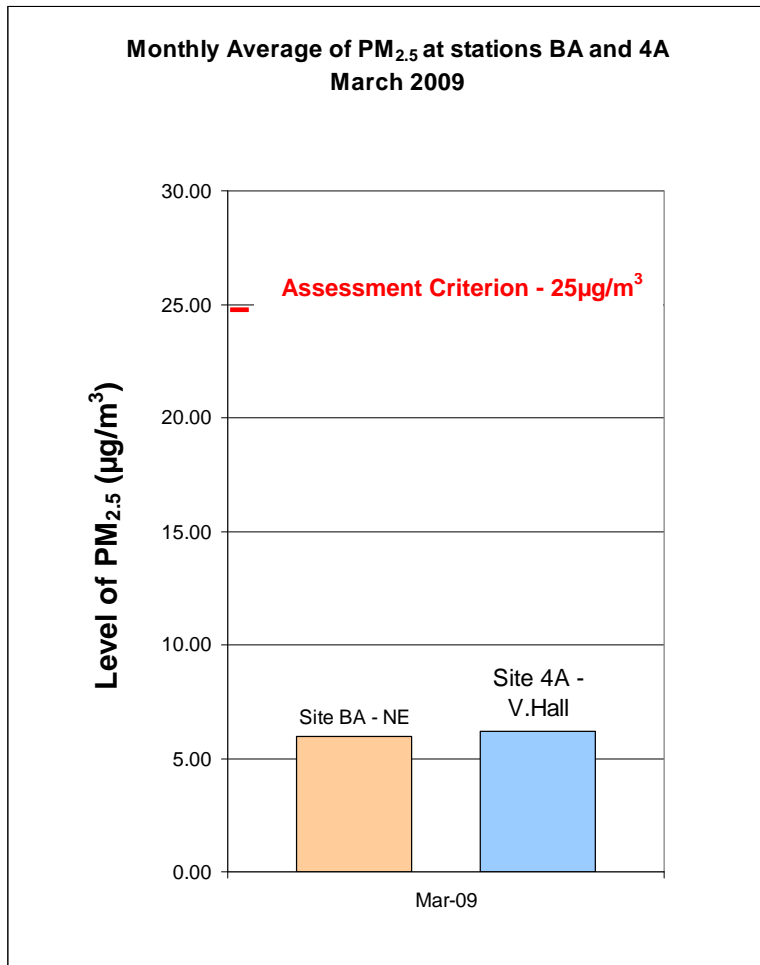


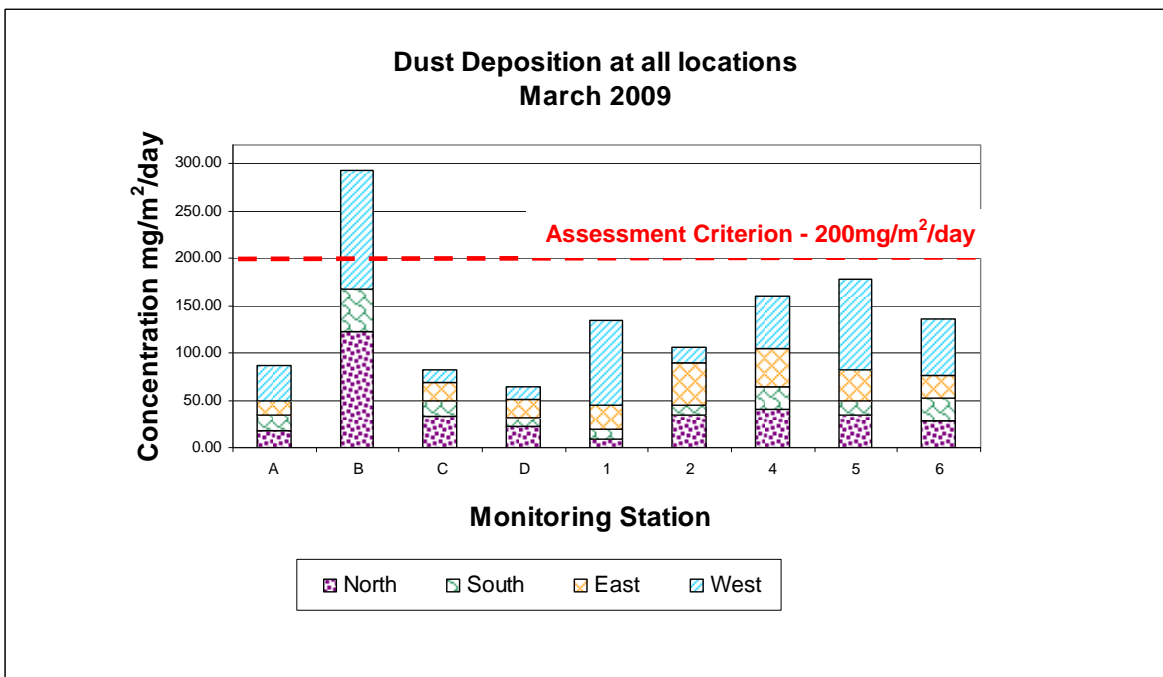
1.2.2 PM_{2.5} Levels

The assessment level of 25µg/m³ was not exceeded at on-site station B or off-site station 4 during the month, with the monthly mean result being 5.97µg/m³ for station B, and 6.19µg/m³ for station 4.



1.2.3 Deposited Dust

The assessment criterion level of 200mg/m²/day was exceeded at station B, with levels at 293mg/m²/day. This is despite missing data from the eastern sample.



There is no conclusive evidence to explain the exceedance of deposited dust at station B, although it is considered that it may be due to trafficked dirt and consequent dust from traffic movement along the spine road. This activity comprised the transportation of vegetation, which had been cleared from the eastern and western boundary, to the low level stocking area.

Levels of dust may have been higher during the month due to the long dry period experienced during 11 to 23 March. This is supported by the higher levels of dust recorded at all off-site stations (compared with recent months) which were 135, 106, 160, 178 and 135mg/m²/day at stations 1, 2, 4, 5 and 6 respectively.

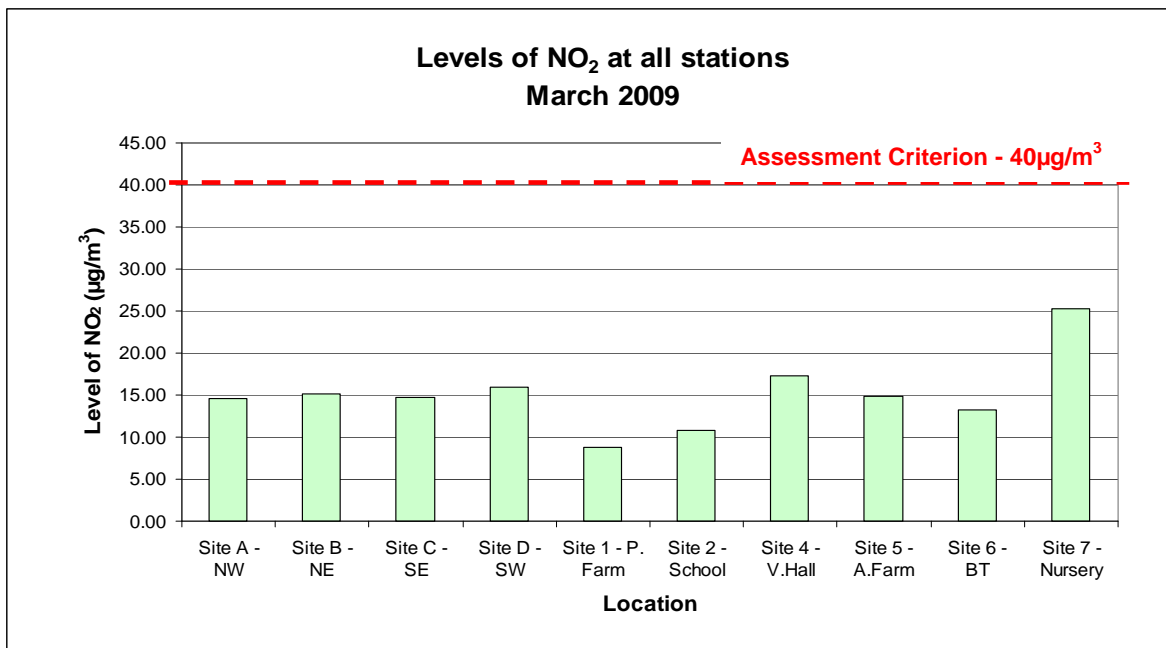
Petrographic analysis indicates that the dust collected from the west at station B comprises 40% silicon rich material, 33% amorphous dirt, 17% unburnt coal, 5% calcium rich material, and 5% plant and animal fragments. From the west at station 5 the dust comprised 50% silicon rich material, 23% amorphous dirt, 12% plant and animal fragments, 8% calcium rich material, 5% iron rich material, and 2% unburnt coal.

The difference in proportion between dust collected from stations B and 5, along with the fact that the wind direction for the month was predominantly northwesterly, suggests that the source of the exceedance at station B did not impact on the surrounding area.

In addition, with nearby on-site stations A and C results being relatively low, at 86 and 82mg/m²/day respectively, and no complaints received from the local community, the exceedance at station B is thus considered to be a short term and local event.

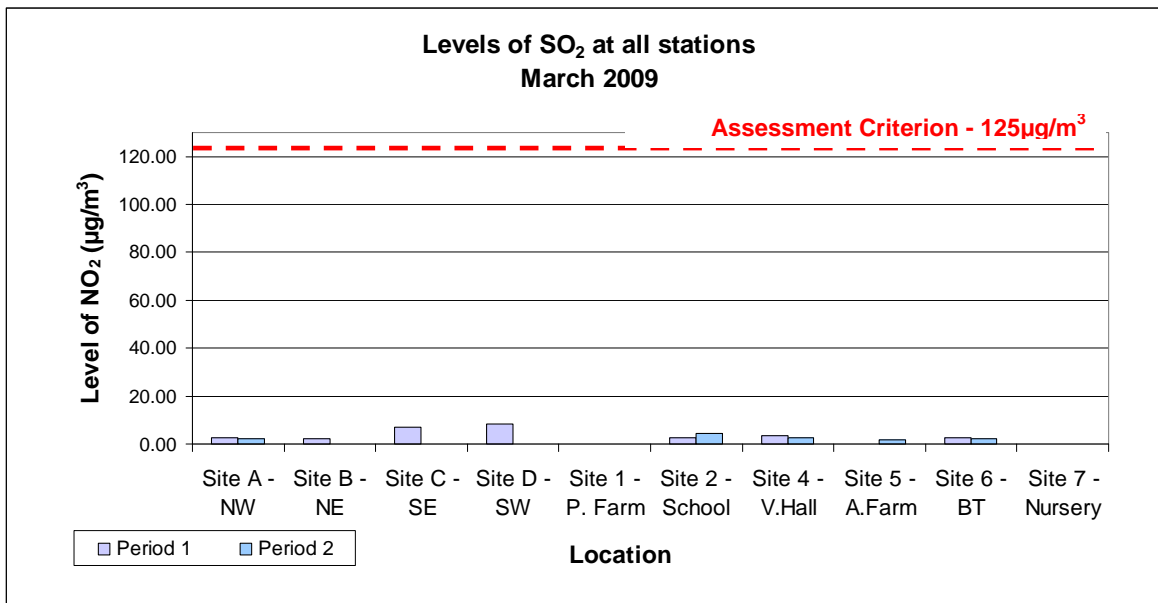
1.2.4 Nitrogen Dioxide

The assessment criteria level developed for NO₂ is 40µg/m³. No stations recorded NO₂ in exceedance of this level, with the highest NO₂ result being 25.28µg/m³, recorded at station 7.



1.2.5 Sulphur Dioxide

The assessment criteria levels developed for SO₂ is 125µg/m³. No stations recorded SO₂ in exceedance of this level, with the highest SO₂ level being 8.58µg/m³ at station D in the first monitoring period.



1.2.6 BTEX Compounds

The assessment criteria limits for benzene and toluene are 5µg/m³ and 1.9mg/m³ per fortnight, respectively. The highest level of benzene was 0.0018µg/m³, recorded at all the stations during the first monitoring period. The highest level of toluene was 0.01µg/m³, recorded at station C during the second period.

1.2.7 Metals

The only metal currently falling under the control of the UK Air Quality Strategy is lead, at a maximum concentration 0.5µg/m³ (annual mean). The highest level of lead recorded was 0.02µg/m³, recorded at station 7 during the first monitoring period, and stations 2, 4, 6 and 7 during the second period.

All other metals were below the assessment criteria developed for the site, and in many cases below LODs.

1.2.8 Cyanide

No National Air Quality Standard has been developed for cyanide; the assessment criteria suggested for the Avenue is a maximum concentration of 50µg/m³ per fortnight. The highest level of cyanide recorded was 0.06µg/m³ at station 4 during the second period.

1.2.9 Phenol(s)

The assessment criteria limits for phenol and cresol are 48µg/m³ and 220µg/m³ per fortnight, respectively. The reporting of phenols is subject to a LOD of 0.2µg/m³ and no results were reported above this level.

1.2.10 PAHs

The maximum allowable fortnightly concentration of Coal Tar Pitch Volatiles is 0.48µg/m³, whilst for naphthalene the figure is 126µg/m³. None of the on or off-site stations recorded concentrations in exceedance of these criteria during March 2009. The highest concentration of total coal tar pitch volatiles was 0.03170µg/m³, whilst the highest naphthalene result was 0.0018µg/m³, both recorded at station B during the second monitoring period.

1.2.11 Quality Control Samples

As part of the routine monitoring programme, quality control samples are submitted in the form of duplicates for all sample media and blanks for phenols, cyanide, metals, PAHs and BTEX. This is to ensure that results generated are accurate and, essentially, reliable. The outcomes for March 2009 are as follows:

Media Blanks

The analysis of media blanks indicated no problems with the contamination of media used for the collection of samples during March 2009.

Duplicates

Duplicate PM₁₀ samples taken at station A correlated well with original data during the month, with duplicate results ranging between 78% and 117% of original results.

Duplicate metals results recorded at station A correlated well with original results during both monitoring periods, with the exception of copper during the first period when the duplicate result was 50% of the original.

Duplicate phenol samples were taken at station 1. No results were reported above the LOD of 0.2µg/m³ during both monitoring periods, and as a result the duplicate results correlated exactly with original results.

Duplicate cyanide samples were taken at station A. No results were reported above the limit of detection (LOD) during both monitoring periods.

The duplicate SO₂ result taken at station B correlated poorly with the original result during the first monitoring period, being 342% of the original. A comparison could not be made for the second period as the original result was not reported above the LOD.

Duplicate results for PAH, BTEX, and NO₂ taken from stations 6 and B correlated well with original results during both monitoring periods.

1.3 Results from Targeted Air Monitoring

Targeted monitoring is undertaken around specific site activities considered to have the potential to liberate airborne contaminants and also to monitor ambient conditions when no works are taking place. Due to the lack of potential for site activities to generate or liberate significant amounts of contaminative materials, targeted monitoring was not required during the month.

Results from Odour Monitoring

1.4.1 Odour Diaries

Background monitoring using odour diaries was suspended at the end of October 2008 following an 18 month period of monitoring; it was considered that a sufficient level of background data have been collected during this period. The odour diary programme is scheduled to resume prior to the remediation phase.

1.4.2 Sensory Field Odour Surveys

A 'cattle' odour was recorded at station 1 on 17 March at odour annoyance impact *medium*.

The 'cattle' odour recorded at station 1 on 17 March at odour annoyance impact *medium* was recorded when the wind was from the direction of the Avenue site. No site activities occurred at the time of this record that would be expected to generate an odour of this type. In addition, station 1 is located approximately 2.6km from the site, and plus, the same odour was recorded on several occasions throughout the month when the wind was not from the direction of the Avenue site. It is thus considered that the odours arising are likely to be due to conditions or activities local to station 1 rather than activities or conditions at the Avenue site.

1.4.3 Complaints

No odour-related complaints were received during March 2009.