

MAGHERAFELT DISTRICT COUNCIL

PROGRESS REPORT ON AIR QUALITY MANAGEMENT

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AIR QUALITY PROGRESS REPORT

1 BACKGROUND

Magherafelt District Council in February 2001 submitted a 1st Stage Review and Assessment of Air Quality. Using DETR guidance documents, the Review and Assessment considered pollutants of concern to determine whether or not a Second Stage Review and Assessment was required. The results of the 1st Stage Review and Assessment are summarised below:

POLLUTANT	2ND STAGE REVIEW AND ASSESSMENT NEEDED
Carbon dioxide	No
Benzene	No
1,3 Butadiene	No
Lead	No
Nitrogen dioxide	Yes
Sulphur dioxide	Yes
PM ₁₀	Yes

A 2nd Stage Review and Assessment was submitted in April 2004. The pollutants highlighted above were subject to further scrutiny and the conclusion of the report in part prepared by NETCEN was that there was no need to proceed to a Stage 3 Review and Assessment for SO₂, NO₂ or PM₁₀.

An 'Air Quality Update and Screening Assessment' (USA) Report was submitted in April 2006. This document will be referred to where relevant later in this report.

Funding continues to be received from the Environment and Heritage Service to carry out further monitoring of nitrogen dioxide on an on-going basis in order to monitor trends over time and validate the conclusions drawn in previous reviews.

2 Review and assessment of Nitrogen Dioxide

2.1 Monitoring results

NO₂ diffusion tubes have been placed at three locations in the Magherafelt District Council area since 1999, and in seven locations since 2002. The results of this monitoring exercise are summarised below.

Table 2.1 Annual average concentrations measured by diffusion tubes at kerbside locations in the Magherafelt area 1999 -2007 ($\mu\text{g}/\text{m}^3$)

Year	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7
1999	38	35	25	-	-	-	-
2000	40	29	27	-	-	-	-
2001	33	31	29	16	-	-	-
2002	32	35	33	19	18	22	25
2003	30	36	32	17	20	25	22
2004	36	37	30	15	16	18	22
2005	23	29	34	15	16	15	18
2006	33	35	33	17	17	14	19

See Appendix 1 for site location details, and discussion section below.

2.2 Discussion

Analysis of the diffusion tubes was carried out by Lambeth Scientific Services Ltd. In line with the approach adopted by NETCEN in their report dated May 2002, when it was reported that there was a high variability in laboratory bias, both positive and negative, no bias correction has been made on the above data.

As can be seen, the annual mean objective level of $40 \mu\text{g}/\text{m}^3$ has not been exceeded at any site in the eight year monitoring period.

In addition, the diffusion tubes are located at kerbside locations and it would be reasonable to anticipate that concentrations at receptor locations would be significantly lower than the figures obtained. Sites 1 and 2 are located in areas of most dense traffic use in Magherafelt town (with minimal residential use), Site 3 is located adjacent to the busiest road junction in Maghera (again with minimal residential use), Sites 4 and 7 are located in areas away from peak traffic use in Magherafelt town, whilst Sites 5 and 6 are located in areas outside the main towns.

2.3 Change of traffic flow at Hillhead Road.

As stated in Progress Report April 2005 and USA Report April 2006 , the proposed A6 Toome by-pass would ease the weight of traffic on that road significantly. The by-pass is now in operation and takes the bulk of traffic away from it's original route thus reducing the impact of traffic on receptors close to the monitoring location. The new route runs through an area of open land in which there are no nearby receptors at present.

Results from Site 6 (adjacent to Toome eel fishery) continue to follow a downward trend year on year.

2.4 Conclusion

The results obtained show that no exceedances have occurred at any of the sample tube locations. It can therefore be concluded that the air quality objective for NO₂ continues to be met throughout the Magherafelt area in each of the years considered.

3 Review and assessment of PM₁₀

3.1 Monitoring situation

A 3rd stage review was not required for PM₁₀ from vehicular, industrial and domestic sources, or from sources of fugitive dust. Data has ceased to be collected from the 8 Port Bubbler located at Greenvale Leisure Centre on the instructions of the Director of Environmental Health.

3.2 Discussion

The A6 Toome by-pass has re-routed traffic away from relevant receptors and is seen as a being a benefit as regards dispersal of pollutants. The total traffic numbers using the by-pass and roads in the general area remain substantially the same.

No significant changes likely to affect pollutant concentrations have occurred since the USA Report was compiled.

3.3 Conclusion

It is considered that there are no significant sources of PM₁₀ which are likely to exceed the objective levels in the Magherafelt District Council area.

4 Review and assessment of Sulphur Dioxide

4.1 Monitoring situation

The 8 Port bubbler is no longer in operation at the Greenvale Leisure Centre.

4.2 Discussion

No significant changes have occurred in the district since submission of the USA Report in April 2006 which would lead to an increase in SO₂ levels. It is anticipated that levels of coal burning in the areas studied previously will reduce further over time

4.3 Conclusion

It is anticipated that objective levels will continue to be met in the Magherafelt District Council area.

5 New local developments.

5.1 New industrial estate at Hillhead Road, Toomebridge

- The infrastructure of the industrial estate is in place to some extent but uptake of sites by industry continues to be slow. The area will be kept under review for inclusion in future studies for relevant pollutants.

Appendix 1

NO₂ diffusion tubes – site location details

Site 1

- Grid reference - 8961 9053
- Adjacent No 19 Queen Street, Magherafelt
- Main route through town, buildings on both sides of road

Site 2

- Grid reference – 8974 9092
- Adjacent No 3 Church Street, Magherafelt
- Main route through town, located between two roundabouts, buildings on both sides of road

Site 3

- Grid reference – 8528 0044
- Adjacent No 58 Main Street, Maghera
- Adjacent to staggered junction at most frequently used part of town

Site 4

- Grid reference 8988 9071
- Wesleyan Mews, Magherafelt (approx 10m from side of Church Street)
- Off main road leading to residential cul-de-sac

Site 5

- Grid reference 9254 9318
- Adjacent No 15 Boyne Row, Castledawson
- Roadside location between terraced houses on both sides of road

Site 6

- Grid reference 9887 9085
- Adjacent No 2 Hillhead Road, Toomebridge (close to eel fishery)
- Area formerly adjacent to main arterial route (new A6 Toome by-pass has taken bulk of traffic away from this location).

Site 7

- Grid reference 8982 9069
- Adjacent No 6 King Street, Magherafelt
- Moderately used route into town centre, built up on both sides of road

