MAGHERAFELT DISTRICT COUNCIL

PROGRESS REPORT ON AIR QUALITY MANAGEMENT

JULY 2010

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Asst. Chief EHO

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 SO_2, NO_2 or PM_{10}.

An 'Air Quality Update and Screening Assessment' (USA) Report was submitted in April 2006, a 'Progress Report on Air Quality Management' was submitted in April 2007 and a further USA Report was submitted in May 2009. NO2 from road traffic is highlighted as the only pollutant continuing to cause concern and action to deal with this situation will shortly commence.

Funding continues to be received from the Department of the Environment 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. Further funding will soon to sought in order that a detailed assessment of the situation can be carried out and future action planned in light of findings.

2 REVIEW AND ASSESSMENT OF NITROGEN DIOXIDE

2.1 Monitoring results

NO_2 diffusion tubes have been placed at locations in the Magherafelt District Council area since 1999, the most recent results are summarised below.

Table 2.1 Annual average concentrations (µg/m^3) measured by diffusion tubes at kerbside locations in the Magherafelt area 2007 -2009

Year	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11	Site 12
2007	47	37	38	18	20	20	22	-	-	-	-	-
2008	43	54	33	20	24	21	25	21	-	-	-	-
2009	46	48	35	21	24	21	24	24	46	55	39	35

Analysis of the diffusion tubes in 2007 was carried out by Lambeth Scientific Services Ltd. Results for 2007 with the exception of site 6 are calculated based on the national databases bias adjustment factor of 1.056 for Lambeth Scentific Services Ltd. The result for site 6 is based on 7 months data and on the local study (Belfast) bias adjustment factor of 1.00.

Analysis of the diffusion tubes in 2008 was carried out by Gradko Environmental. 2008 results for sites 1 - 7 are calculated based on 12 months data and the national database bias adjustment factor of 0.92 for Gradko Environmental. Site 8 is based on 4 months data and the local study (Belfast) bias adjustment factor of 0.79.

Analysis of the diffusion tubes in 2009 was carried out by Gradko Environmental. The 2009 result for site 1 is based on 6 months data and the local study (Belfast) bias adjustment factor of 0.87. Site 2 is calculated based on 10 months data and the national database bias adjustment factor of 0.9 for Gradko Environmental. Sites 3 - 8 are calculated based on 11 months data and the national database bias adjustment factor of 0.9 for Gradko Environmental. Sites 9 – 12 are calculated based on 3 months data and the local study (Belfast) bias adjustment factor of 0.87.

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

2.2 Discussion

The contract to supply and analyse diffusion tubes was awarded to Gradko International Ltd in 2008.

The overarching objective of the monitoring activity is to maintain or improve human health by measuring levels of pollution on an on-going basis and to act on the results obtained. This objective has been achieved in Sites 3 - 8 as data collected for NO2 confirms that levels of this pollutant relevant to this scheme meet with standards set.

Site 1 has been de-commissioned as there was found to be no residential property at or near that location. Site 8 represents the nearest residential accommodation in that locality, which is off-set from the roadside. Additional sites have been identified in the area surrounding Site 2 which is adjacent to two roundabouts and lies in an area of heavy traffic use and has several dwelling located on the kerbside.

2.3 Conclusion

From Table 2.1 it can be seen that areas of concern are at Sites 2, 9 and 10 which are in Church Street which is a main route into town and in which two roundabouts regulate the flow of traffic. Residential property is situated along that street directly off the pavement.

Steps will shortly be taken to progress to a Detailed Assessment of the above area.

3 NEW/ EXISTING LOCAL DEVELOPMENTS

3.1 Industrial estate at Hillhead Road, Toomebridge

The infrastructure of the industrial estate is now in place but at present the uptake of sites by industry continues to be slow. The area will remain under review for inclusion in future studies for relevant pollutants.

3.2 Other developments

No significant new industrial processes, road schemes, mineral or landfill developments, retail or residential developments have been commenced which would be expected to affect air quality in the locality. Full scrutiny of and reporting on such developments will take place should they arise.

Appendix 1

NO_2 diffusion tubes – site location details (2008 – 2009)

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

Site 8

- Grid reference 8952 9055
- 42 Queen Street, Magherafelt
- Off main route leading into town at closest domestic receptor

Site 9

- Grid reference 8974 9072
- 12 Church Street, Magherafelt
- Main route through town, located between two roundabouts, buildings on both side of road

Site 10

- Grid reference 8980 9074
- 30 Church Street, Magherafelt
- Adjacent mini roundabout on main route through town

Site 11

- Grid reference 8980 9071
- 11 King Street, Magherafelt
- Moderately used route into town, buildings on both side of road

Site 12

- Grid reference 8990 9075
- Off-set from 41 Church Street, Magherafelt
- Main route through town, in open location