



BANBRIDGE
DISTRICT COUNCIL

2010 Air Quality Progress Report for Banbridge District Council

In fulfillment of the Environment (Northern Ireland) Order
2002 - Local Air Quality Management

April 2010

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Executive Summary

Diffusion Tube monitoring during 2009 at 7 locations within Banbridge District Council's area has demonstrated that there are no NO₂ levels exceeding the objective limit of 40ug/m³. Therefore no AQMA's will be declared at this time for any of the sites monitored by Banbridge District Council. No detailed assessments are required for NO₂ at this time.

Banbridge District Council has not seen any significant changes from any pollution sources since the last round of review and assessment and no other sources of pollution have been identified. Therefore the likely impact from such sources is negligible.

Banbridge District Council has not identified the requirement for any proposed actions at this time as a result of information identified in this Progress Report.

The next course of action to be taken by the council is to complete and submit a Progress Report in 2011.

Table of contents

1	Introduction	6
1.1	Description of Local Authority Area	6
1.2	Purpose of Progress Report	6
1.3	Air Quality Objectives	6
1.4	Summary of Previous Review and Assessments	8
2	New Monitoring Data	9
2.1	Summary of Monitoring Undertaken	9
2.2	Comparison of Monitoring Results with Air Quality Objectives	11
3	New Local Developments	14
4	Local / Regional Air Quality Strategy	15
5	Planning Applications	17
6	Air Quality Planning Policies	18
7	Local Transport Plans and Strategies	19
8	Climate Change Strategies	22
9	Implementation of Action Plans	23
10	Conclusions and Proposed Actions	24
11	References	25

Appendices

- Appendix A QA/QC DATA
- Appendix B Diffusion Tube Monitoring Sites Maps
- Appendix C 2009 NO₂ Diffusion Tube Monitoring Data

List of Tables

- Table 1.1 Air Quality Objectives included in Regulations for the purpose of Local Air Quality Management in Northern Ireland.
- Table 1.4 Summary of Previous Review and Assessment Report completed by Banbridge District Council
- Table 2.2 Details of Non- Automatic Monitoring Sites
- Table 2.3 Diffusion Tube Monitoring Sites
- Table 2.4a Results of Nitrogen Dioxide Diffusion Tubes
- Table 2.4b Results of Nitrogen Dioxide Diffusion Tubes in previous years

1 Introduction

1.1 Description of Local Authority Area

Banbridge District covers approximately 180 square miles in the north west of County Down and has a population of around 41,392. It is a predominantly rural area with a largely agricultural economic base. The main centres of population are Banbridge town, the focus of administration and commercial activity in the District, and the smaller settlements of Dromore, Rathfriland, Gilford, Loughbrickland and Scarva.

The District is dissected by two major traffic routes. The A1 from Belfast to Dublin runs along the outskirts of Dromore, Banbridge town and Loughbrickland through a traditionally rural area. In recent years residential development has expanded in proximity to the carriageway. This is to some extent due to the area becoming a convenient satellite residential base for commuters to Belfast. The A50 from Castlewellan to Portadown passes through the centre of Banbridge town. It crosses the A1 via a flyover in the developing residential area to the east of the town.

There are four relatively large quarries located in the District. Activities include rock blasting, crushing, screening, manufacture of bitmac and asphalt coating products and cement and concrete production. Other industries include animal feed, cement and food production, timber processing, textile manufacturing and engineering works. Some of these processes are prescribed for authorisation under IPC.

Domestic fuel usage throughout the District has historically been based on solid fuel but, as with the province generally, the use of coal is declining.

1.2 Purpose of Progress Report

Progress Reports are required in the intervening years between the three-yearly Updating and Screening Assessment reports. Their purpose is to maintain continuity in the Local Air Quality Management process.

They are not intended to be as detailed as Updating and Screening Assessment Reports, or to require as much effort. However, if the Progress Report identifies the risk of exceedence of an Air Quality Objective, the Local Authority (LA) should undertake a Detailed Assessment immediately, and not wait until the next round of Review and Assessment.

1.3 Air Quality Objectives

The air quality objectives applicable to LAQM in **Northern Ireland** are set out in the Air Quality Regulations (Northern Ireland) 2003, Statutory Rules of Northern Ireland 2003, no. 342, and are shown in Table 1.1. This table shows the objectives in units of microgrammes per cubic metre $\mu\text{g}/\text{m}^3$ (milligrammes per cubic metre, mg/m^3 for carbon monoxide) with the number of exceedences in each year that are permitted (where applicable).

Table 1.1 Air Quality Objectives included in Regulations for the purpose of Local Air Quality Management in Northern Ireland.

Pollutant	Concentration	Measured as	Date to be achieved by
Benzene	16.25 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2003
	3.25 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2010
1,3-Butadiene	2.25 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2003
Carbon monoxide	10.0 mg/m^3	Running 8-hour mean	31.12.2003
Lead	0.5 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2004
	0.25 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2008
Nitrogen dioxide	200 $\mu\text{g}/\text{m}^3$ not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2005
Particles (PM₁₀) (gravimetric)	50 $\mu\text{g}/\text{m}^3$, not to be exceeded more than 35 times a year	24-hour mean	31.12.2004
	40 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2004
Sulphur dioxide	350 $\mu\text{g}/\text{m}^3$, not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 $\mu\text{g}/\text{m}^3$, not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 $\mu\text{g}/\text{m}^3$, not to be exceeded more than 35 times a year	15-minute mean	31.12.2005

1.4 Summary of Previous Review and Assessments

Table 1.4- Summary of Previous Review and Assessment Report completed by Banbridge District Council

Report Type	Date	Exceedences	Detailed Assessment Required	AQMA's Declared
Initial Review and Assessment	Jan 2001	None	No	None
Supplementary Report on SO ₂ and PM ₁₀	Nov 2004	None	No	None
Progress Report	April 2005	None	No	None
Updating & Screening Assessment	April 2006	None	No	None
Progress Report	April 2007	None	No	None
Progress Report	April 2008	None	No	None
Updating and Screening Assessment	April 2009	None	No	None

2 New Monitoring Data

2.1 Summary of Monitoring Undertaken

2.1.1 Automatic Monitoring Sites

There are no automatic monitoring sites within the Banbridge District Council area.

2.1.2 Non-Automatic Monitoring

Banbridge District Council carries out monitoring of NO₂ by diffusion tubes at seven sites within the District. The NO₂ diffusion tubes were prepared and analysed by Gradko International. Gradko International was contracted to supply and analyse the diffusion tubes from the beginning of June 2007. This laboratory takes part in the NO₂ Network QA/QC Field Intercomparison survey. Gradko International's diffusion tubes are prepared by coating the grids in 20% TEA in water. Analysis is carried out using a colorimetric technique.

None of the sites were co-located with an automatic NO₂ analyser. Details are given in Table 2.2.

Diffusion Tube Bias Adjustment Factors

The NO₂ diffusion tubes were prepared and analysed by Gradko International from the beginning of June 2007. This laboratory takes part in the NO₂ Network QA/QC Field Intercomparison survey. Gradko International's diffusion tubes are prepared by coating the grids in 20% TEA in water. Banbridge District Council obtained the appropriate bias factor from the UWE Review and Assessment Website. A factor of 0.86 was taken from the drop down menus available on the excel spreadsheet matrix.

Factor from Local Co-location Studies (if available)

Banbridge District Council did not use a Bias Factor from a local Co-location study. Banbridge does not have an automatic NO₂ analyser in the district to carry out a co-location assessment. Also, although a co-location factor may be available from two other neighbouring councils (Armagh & Newry), both of these councils use a different diffusion tube supplier and analysing laboratory to Banbridge.

Discussion of Choice of Factor to Use

Banbridge District Council used the Bias Factor from the UWE Air Quality Website. This was calculated by using the matrix available on the site by selecting the appropriate laboratory, year of monitoring and significant methodology. Banbridge District Council used a bias factor for 2009 (0.86)

QA/QC of diffusion tube monitoring

See Appendix A for Scientifics WASP data

Table 2.2 Details of Non- Automatic Monitoring Sites

Site Name	Site Type	Pollutants Monitored	In AQMA ?	Relevant Exposure? (Y/N with distance (m) to relevant exposure)	Distance to kerb of nearest road (N/A if not applicable)	Worst-case Location ?
Site 1	Roadside	NO ₂	N	Y (5m)	2m	Y
Site 2	Roadside	NO ₂	N	Y (5m)	2m	Y
Site 3	Roadside	NO ₂	N	Y (5m)	2m	Y
Site 7	Urban background	NO ₂	N	Y (10m)	50m+	Y
Site 8	Urban Background	NO ₂	N	Y (10m)	50m+	Y
Site 10	Roadside	NO ₂	N	Y (10m)	3m	Y
Site 11	Roadside	NO ₂	N	Y (10m)	2.5m	Y

Figure 2.2 Map(s) of Non-Automatic Monitoring Sites (if applicable)

See Appendix B

2.2 Comparison of Monitoring Results with Air Quality Objectives

Table 2.3 Diffusion Tube Monitoring Sites

Pollutant	Equipment	Location	Eastings	Northings	Site Type
NO ₂	Nitrogen Dioxide diffusion tubes	(SITE 1) Church Street Dromore	320013	353392	Roadside
		(SITE 2) Kenlis Street Banbridge	312596	345554	Roadside
		(SITE 3) Mill Street GILFORD	306680	348346	Roadside
		(SITE 8) 17 Springfields, Banbridge BT32 3LT	312010	344249	Urban Background
		(SITE 10) 7 Hillview Terrace, Dromore Street, Banbridge BT32 4BS	312845	346275	Roadside
		(SITE7) 9 Fortfield, Maypole Hill, Dromore BT25 1DD	319800	353508	Urban Background
		(SITE 11) A1 Dromore By- Pass	319803	353635	Roadside

2.2.1 Nitrogen Dioxide

There are no automatic monitoring sites within the Banbridge District Council Area

Automatic Monitoring Data

Banbridge District Council does not have any automatic monitoring sites in the Council district

Diffusion Tube Monitoring Data**Table 2.4a Results of Nitrogen Dioxide Diffusion Tubes**

Site ID	Location	Within AQMA?	Data Capture for full calendar year 2008 %	Data Capture for monitoring period %	Annual mean concentrations
					2009 ($\mu\text{g}/\text{m}^3$) Adjusted for bias
Site 1	Church Street	N	100	100	30
Site 2	Kenlis Street	N	100	100	32
Site 3	Mill St, Gilford	N	100	100	30
Site 7	9 Fortfield	N	100	100	12
Site 8	17 Springfields	N	100	100	14
Site 10	7 Hillview Terrace	N	100	100	30
Site 11	A1 Dromore By-Pass	N	100	100	38

Note: Sites 1, 2 & 3 were added to the monitoring programme at the beginning of January 2009.

Table 2.4b Results of Nitrogen Dioxide Diffusion Tubes in previous years

Site ID	Location	Within AQMA?	Annual mean concentrations ($\mu\text{g}/\text{m}^3$) Adjusted for bias		
			2006	2007	2008
Site 7	9 Fortfield	N	13	11	12
Site 8	17 Springfields	N	17	11	13
Site 10	7 Hillview Terrace	N	34	25	32
Site 11	A1 By-pass Dromore	N	42	33	41

2.2.2 PM₁₀

Banbridge District Council does not carry out monitoring for PM₁₀ pollution at this time

2.2.3 Sulphur Dioxide

Banbridge District Council does not carry out monitoring for Sulphur Dioxide at this time.

2.2.4 Benzene

Banbridge District Council does not carry out monitoring for Benzene at this time.

2.2.5 Other pollutants monitored

Not Applicable

2.2.6 Summary of Compliance with AQS Objectives

Banbridge District Council has examined the results from monitoring in the district. Concentrations are all below the objectives, therefore there is no need to proceed to a Detailed Assessment.

3 New Local Developments

Banbridge District Council confirms that there are no new or newly identified local developments which may have an impact on air quality within the Local Authority area.

4 Local / Regional Air Quality Strategy

The Banbridge District Council's Local Air Quality Management Strategy 2006 – 2010 was launched in tandem with the 4 neighbouring councils (Armagh, Craigavon, Dungannon & South Tyrone and Newry) in Southern Group in March 2006. It was issued for public consultation and Banbridge District Council consulted the community, statutory consultees and key organisations that have an interest in local air quality affecting the Banbridge District Area

Since the launch of the Strategy the key responsibility of the Southern Group Local Air Quality Manager along with the corresponding council officers has been to implement the objectives outlined in Section 4 of the strategy document. The objectives served to act as a guide for the councils on how to minimise the impact of pollution on air quality from a variety of sources and details actions on how best to achieve these objectives.

The strategy highlights the lead role being played in the delivery of each objective and the relevant partners required to work together in order to achieve successful delivery of each objective aim and the respective cost of doing so.

The Council has found it difficult to implement the strategy due to budgetary constraints both within Council and with the strategic partner organisations, particularly since the beginning of the international economic downturn in late 2007. Other constraints include a lack of power or authority by the Council and its neighbouring LA's to encourage the uptake of the objectives contained within the strategy. However, the Council has had some success in delivering several actions. These are listed below;

To Promote and Maximise the use of public transport, car-sharing, walking and cycling as a means to get to School

- Launch of Walk to School Competition May 2006
- News article on Walk to School completed by Brian Black for UTV news November 2006
- Walk to School Competition and Presentation with Guest Speaker Brian Black (UTV environment correspondent) November 2006.
- Walk to School Competition photos and press release sent to main newspaper in each district.
- Schools Air Quality Conference programmed for April 2008 had to be cancelled due to low response from schools. New air quality conference scheduled for 24th September 2008. Broader in perspective but schools will still take part in some role.
- Walk to school, Cycle to School and use of public transport to school High visibility campaign launched to raise awareness at school level.

To Promote and Maximise the use of public transport, car-sharing, walking and cycling as a means to get to Work

- Questionnaire sent in payslip to all Banbridge Staff about travel to work preferences. Questionnaire reported to council and agreement reached upon implementation of CarShare Scheme for council staff.
- Southern Group CarShare Scheme rolled out and promoted to each council within Southern Group during 2007.
- Launch of Southern Group CarShare Scheme promotional drive. Newly joined members entered into draw for 2 mountain bikes. Both bikes won by staff from Newry and Mourne District Council. Pictures and editorial of bike winners published in Newry newspapers. NOTE: No members of staff at Banbridge District Council are currently members of the CarShare Scheme. Issue to be tackled as part of STAQ campaign.

To actively target the population in general with relevant air quality messages and information.

- Completed under the STAQ campaign also. STAQ is being promoted by the Local Air Quality Management Officer as a project of high visibility with posters and banners, media and press releases throughout the entire southern group area with the aim of bringing the air quality agenda to everyone. It will be mostly demonstrated in areas where there is a higher risk of exceedences of the objective limits in the air quality legislation and guidance (LAQM TG03).

The Southern Group Local Air Quality Strategy is available upon request from the Council.

The Strategy will be reviewed at the end of 2010.

5 Planning Applications

N/A

6 Air Quality Planning Policies

N/A

7 Local Transport Plans and Strategies

Regional Transportation Strategy

The Regional Transportation Strategy (RTS) for Northern Ireland 2002- 2012 identifies strategic transportation investment priorities and considers potential funding sources and affordability of planned initiatives. The RTS focuses on three geographic areas and one overlying Network. These are as follows:

- Belfast Metropolitan Area (BMA), containing the continuous area comprising Belfast City Council and the built-up areas within the Council areas of Carrickfergus, Castlereagh, Lisburn, Newtownabbey and North Down;
-
- Other Urban Areas (OUAs): collectively those towns described as main or local hubs in the RDS (including Dungannon) and other towns outside the BMA with a population greater than 5,000);
- Rural Area – the remainder of Northern Ireland; and
- Regional Strategic Transport Network (RSTN) comprising the complete rail network and all motorway and trunk road links (including the Key Transport Corridors and Link Corridors).

The RTS is a “daughter document” of the Regional Development Strategy (RDS), which sets out the spatial development framework for Northern Ireland up to 2025. Implementation of the Strategy will be through three Transport Plans covering the Regional Strategic Transport Network (RSTN), the Belfast Metropolitan Area (BMA), and the Sub-Regional Transport Plan (SRTP). Transport studies undertaken to support the RSTN Transport Plan will take due account of current and future cross-border inter-urban transport demands and the roles of the gateway cities and towns, including Banbridge.

3.4 Regional Strategic Transport Network Transport Plan

The Regional Strategic Transport Network (RSTN) Transport Plan prepared by the Department for Regional Development (DRD) covers the complete rail network, five Key Transport Corridors (KTCs), four Link Corridors, the Belfast Metropolitan Transport Corridors and the remaining trunk network across Northern Ireland. The Plan is based on the guidance set out in the Regional Development Strategy (RDS) and the Regional Transportation Strategy (RTS), as described in Sections 3.2 and 3.3, above.

The RSTN Transport Plan consists of proposals for transport schemes and measures for the maintenance, management and development of the RSTN until 2015. The RSTN Transport Plan also includes a number of measures for rail, bus, roads, walking and cycling.

3.5 Sub-Regional Transport Plan 2015

The Sub-Regional Transport Plan (SRTP) was prepared by the Department for Regional Development (DRD) and completed in 2007. The SRTP is based upon the guidance provided by the Regional Development Strategy (RDS) and the Regional Transportation Strategy (RTS). Proposed public transport measures for Dungannon (within category of Other Urban Areas (OUA)) contained within the SRTP are as follows:

- Improved walk/cycle
- Improved local bus services
- Bus stop Improvement Strategy
- Bus based Park and Ride
- Increased parking at bus/rail station
- Taxi rank
- Transport Programme for People with Disabilities

Spatial Development Strategy for Northern Ireland

The Spatial Development Strategy (SDS) guides the physical development of the Region to 2025. The SDS will contribute to meeting a number of key regional challenges emerging from the significant local, national and international forces, which will drive change over the next 25 years, including:

Transport:

- Promote a change in travel culture and particularly manage the effects of a possible 100% growth in the number of vehicles by 2025;
- Contribute to the creation of a modern, sustainable, safe transportation system for the Region, meeting the travel needs of all groups in society;
- Accommodate the growing volume of freight moving to and from the regional gateways; and
- Strengthen the regional gateways to handle the increasing flow of people and goods in and out of the Region.

Environment:

- Accommodate future development growth while protecting and caring for the environment;
- Reduce the consumption of resources;
- Continue to maintain or, where needed, to improve the quality of air, water and land resources within the Region;
- Seek to maintain local landscape character and to conserve cultural assets; and
- Take particular care to sustain and, where required, to enhance the biodiversity of the Region, its natural habitats, high quality landscapes and built heritage.

Developing a Regional Transportation System

Creating an upgraded and integrated transport system, built around the Regional Strategic Transport Network of the key transport corridors with their main public transport services providing the framework for future development is recognised as one of the key assets to accommodate growth. Strategic planning guidelines relating to the development of a Regional Transport System (RTS) are as follows:

- **SPG-TRAN 1:** To develop a Regional Strategic Transport Network (RSTN), based on Key Transport Corridors (KTCs), to enhance accessibility to regional facilities and services. Two major roads within the Borough are identified in the RDS as part of the Key Transport Corridors in Northern Ireland: -
 - A4 Dungannon - Fivemiletown Road: The South Western Corridor; and
 - A5 Aghnacloy - Omagh Road: The Western Corridor.
- In addition, the A29 Cookstown to Moy Road is identified as part of one of three additional Link Corridors in the RTS.
- **SPG-TRAN 2:** To extend travel choice for all sections of the community by enhancing public transport. Including the strengthening of the regional bus network (including the promotion of public transport routes and Park and Ride schemes) and the regional rail system;
- **SPG-TRAN 3:** To integrate land use and transportation to provide a much better range of travel choices for all, and reduce the demand for travel; and
- **SPG-TRAN 4:** To change the regional travel culture and contribute to healthier lifestyles, such as giving greater priority to encouraging more walking and cycling.

8 Climate Change Strategies

N/A

9 Implementation of Action Plans

N/A

10 Conclusions and Proposed Actions

Diffusion Tube monitoring at 7 locations within Banbridge District Council's area has demonstrated that there are no NO₂ levels exceeding the objective limit of 40ug/m³. Therefore no AQMA's will be declared at this time for any of the sites monitored by Banbridge District Council. No detailed assessments are required for NO₂ at this time.

Banbridge District Council has not seen any significant changes from any pollution sources since the last round of review and assessment and no other sources of pollution have been identified. Therefore the likely impact from such sources is negligible.

Banbridge District Council has not identified the requirement for any proposed actions at this time as a result of information identified in this Progress Report.

The next course of action to be taken by the council is to complete and submit a Progress Report in 2011.

11 References

Local Air Quality Management Technical Guidance – LAQM.TG(09)

Appendices

Appendix A: QA/QC Data

Appendix B: Diffusion Tube Monitoring Sites Maps

Appendix A: QA:QC Data

Diffusion Tube Bias Adjustment Factors

The NO₂ diffusion tubes were prepared and analysed by Gradko International from the beginning of June 2007. This laboratory takes part in the NO₂ Network QA/QC Field Intercomparison survey. Gradko International's diffusion tubes are prepared by coating the grids in 20% TEA in water. Banbridge District Council obtained the appropriate bias factor from the UWE Review and Assessment Website. A factor of 0.86 was taken from the drop down menus available on the excel spreadsheet matrix.

Factor from Local Co-location Studies (if available)

N/A

Discussion of Choice of Factor to Use

Banbridge District Council used the Bias Factor from the UWE Air Quality Website. This was calculated by using the matrix available on the site by selecting the appropriate laboratory, year of monitoring and significant methodology. Banbridge District Council used a bias factor for 2009 (0.86)

PM Monitoring Adjustment

N/A

Short-term to Long-term Data adjustment

N/A

QA/QC of automatic monitoring

N/A

QA/QC of diffusion tube monitoring



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GRADKO Environmental Laboratory; Nitrogen Dioxide (NO₂) WASP Results.

Our WASP results for January 2008 to January 2010 were as follows:

Jan08 Round 100 : Ref Value : 1.36ugNO₂; Measured Value : 1.34 ugNO₂ Z score -0.1
Satisfactory.

Ref Value 1.47ugNO₂; Measured Value : 1.50 ugNO₂ Z score 0.2
Satisfactory.

March 08 Round 101 Ref Value : 0.92ug NO₂; Measured Value : 0.95ugNO₂ Z Score 0.2
Satisfactory.

Ref Value : 1.86ugNO₂; Measured Value : 1.85ugNO₂ Z Score 0 **Satisfactory.**

July 08 Round 102 Ref Value : 1.37ugNO₂ Measured Value : 1.42ugNO₂ Z Score 0.3 **Satisfactory.**

Ref value : 2.28ugNO₂; Measured Value : 2.21ugNO₂ Z score -0.2 **Satisfactory.**

Jan 09 Round 104 Ref Value : 2.02ugNO₂; Measured Value : 1.85ugNO₂ Z Score -0.7 **Satisfactory.**

Ref Value : 1.22ug NO₂; Measured Value : 1.21ugNO₂ Z Score - 0.1 **Satisfactory.**

Apr 09 Round 105 Ref Value : 1.68ugNO₂; Measured Value : 1.63ugNO₂ Z Score -0.4 **Satisfactory.**

Ref Value : 0.96ug NO₂; Measured Value : 0.92ugNO₂ Z Score - 0.5 **Satisfactory.**

July 09 Round 106 Ref Value : 1.84ugNO₂; Measured Value : 1.88ugNO₂ Z Score 0.3 **Satisfactory.**

Ref Value : 1.42ug NO₂; Measured Value : 1.34ugNO₂ Z Score - 0.8 **Satisfactory.**

October 09 Round 107 Ref Value : 2.03ugNO₂; Measured Value : 1.87ugNO₂ Z Score -1.1
Satisfactory.

Ref Value : 2.20ug NO₂; Measured Value : 1.96ugNO₂ Z Score -1.4 **Satisfactory.**

January 2010 Round 108 Ref Value : 1.92ugNO₂; Measured Value : 1.87ugNO₂ Z Score - 0.3
Satisfactory.

Ref Value : 1.47ug NO₂; Measured Value : 1.45ugNO₂ Z Score -0.2 Satisfactory.

The criteria for Z-scores are: Z score of < +/- 2 Satisfactory Result

Z score of < +/- 2 and < +/- 3 Questionable (Warning) Result

Z score of > +/- 3 Unsatisfactory Result

The above criteria has been set by HSL and AEA, and as from April 2010 the performance scores will be based on Rolling Performance Index (RPI) and not Z-scores.

For the precision (bias+) data: AEAT (NETCEN) have advised that Local Authorities requiring bias adjustment factors should refer the Review and Assessment website;
<http://www.uwe.ac.uk/agm/review/>

If you require any further information please contact me.

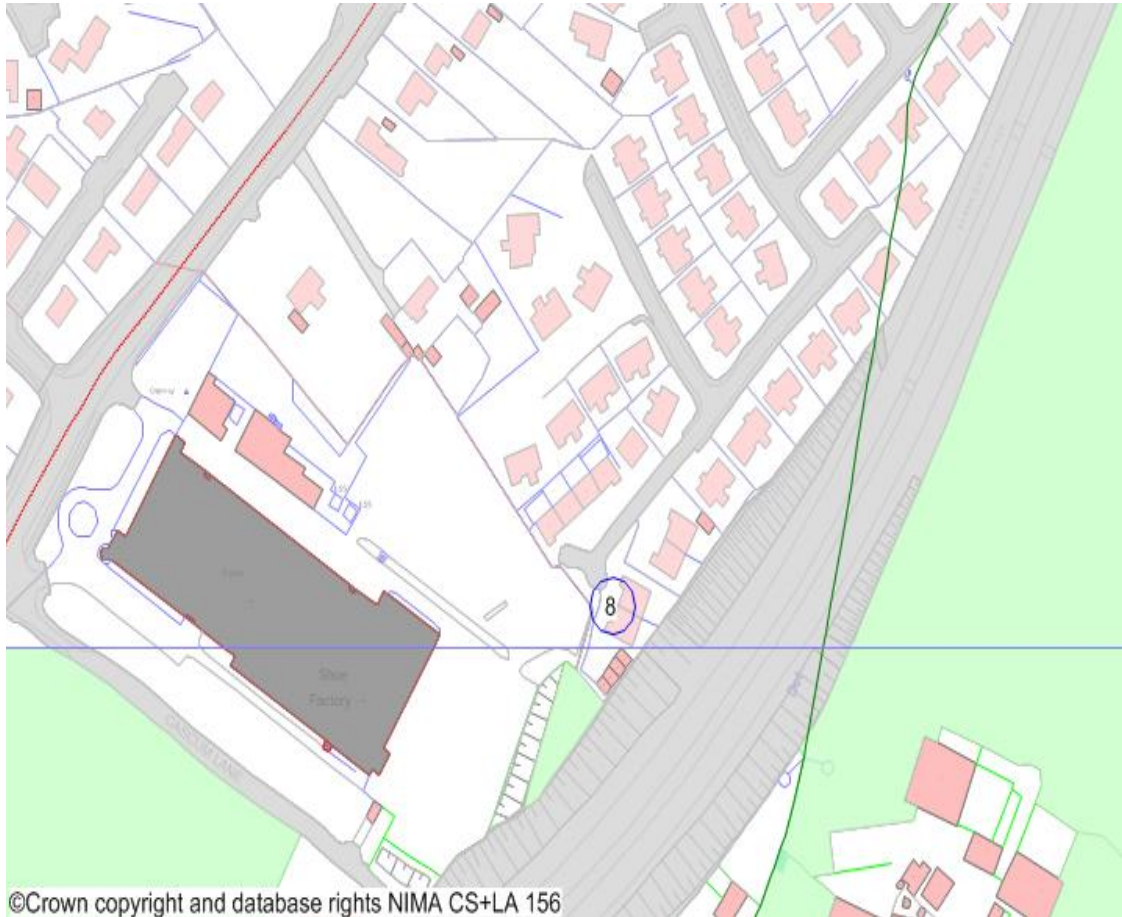
Dr. Jim McEvoy.

APPENDIX B

Diffusion Tube Monitoring Sites Maps

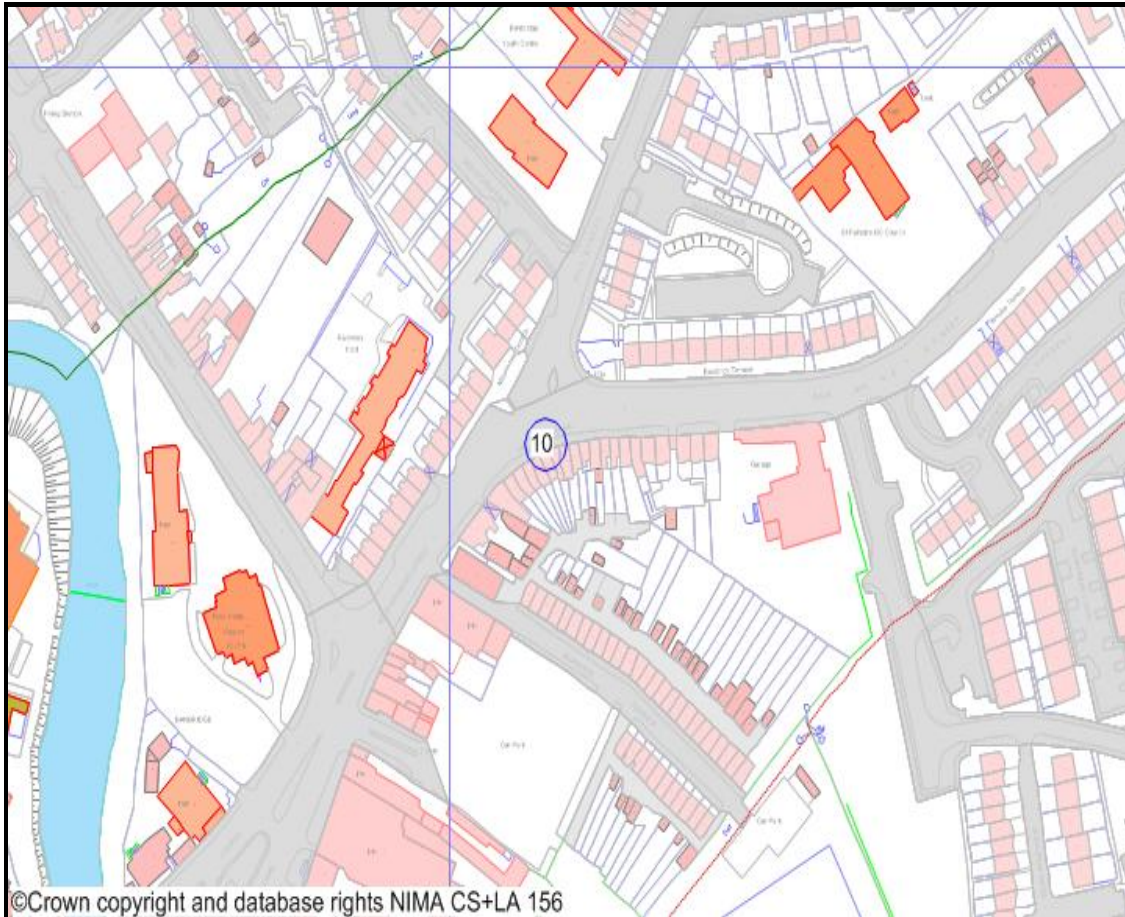
Map 1

Site at 17 Springfields, Banbridge BT32 3LT



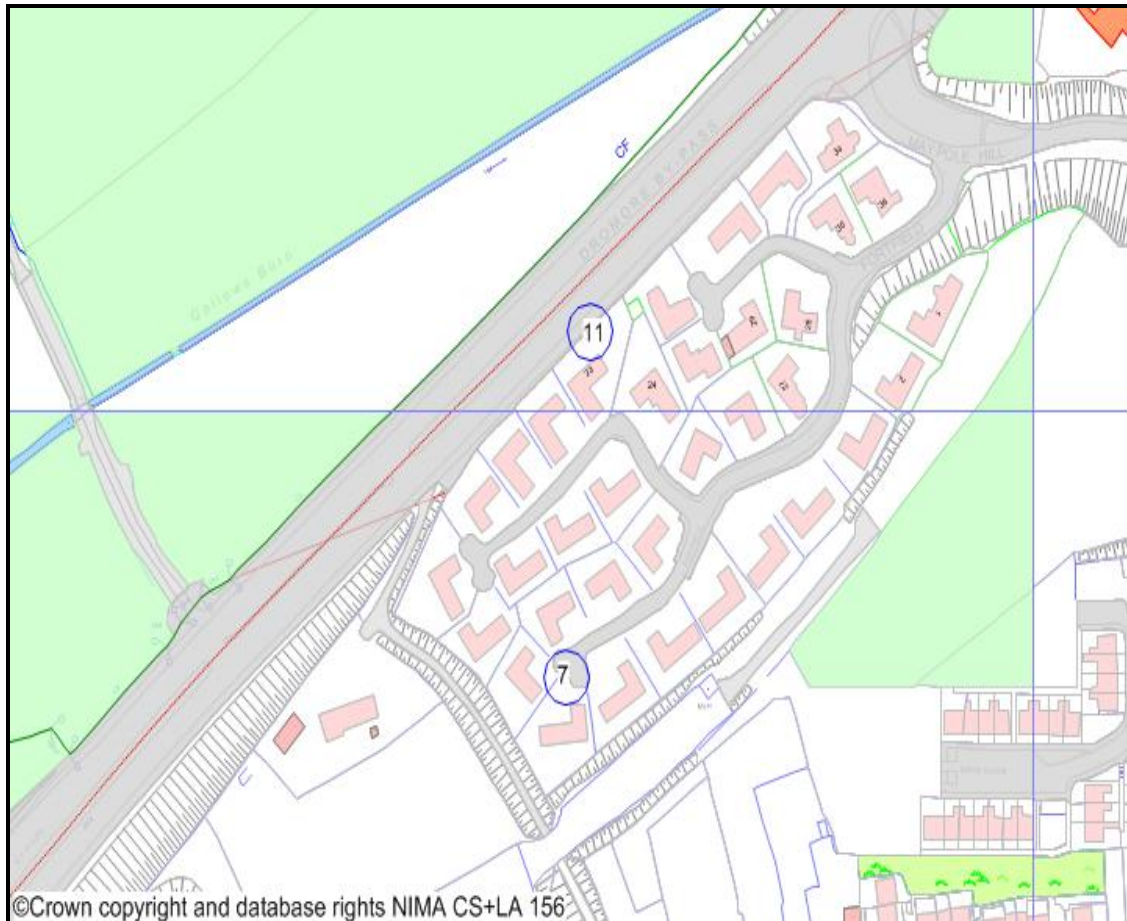
Map 2

Site at 7 Hillview Terrace, Dromore Street, Banbridge BT32 4BS



Map 3

Sites at 9 Fortfield, Maypole Hill, Dromore BT25 1DD and A1 Dromore By-Pass



MAP 4

Site at Church Street, Dromore.



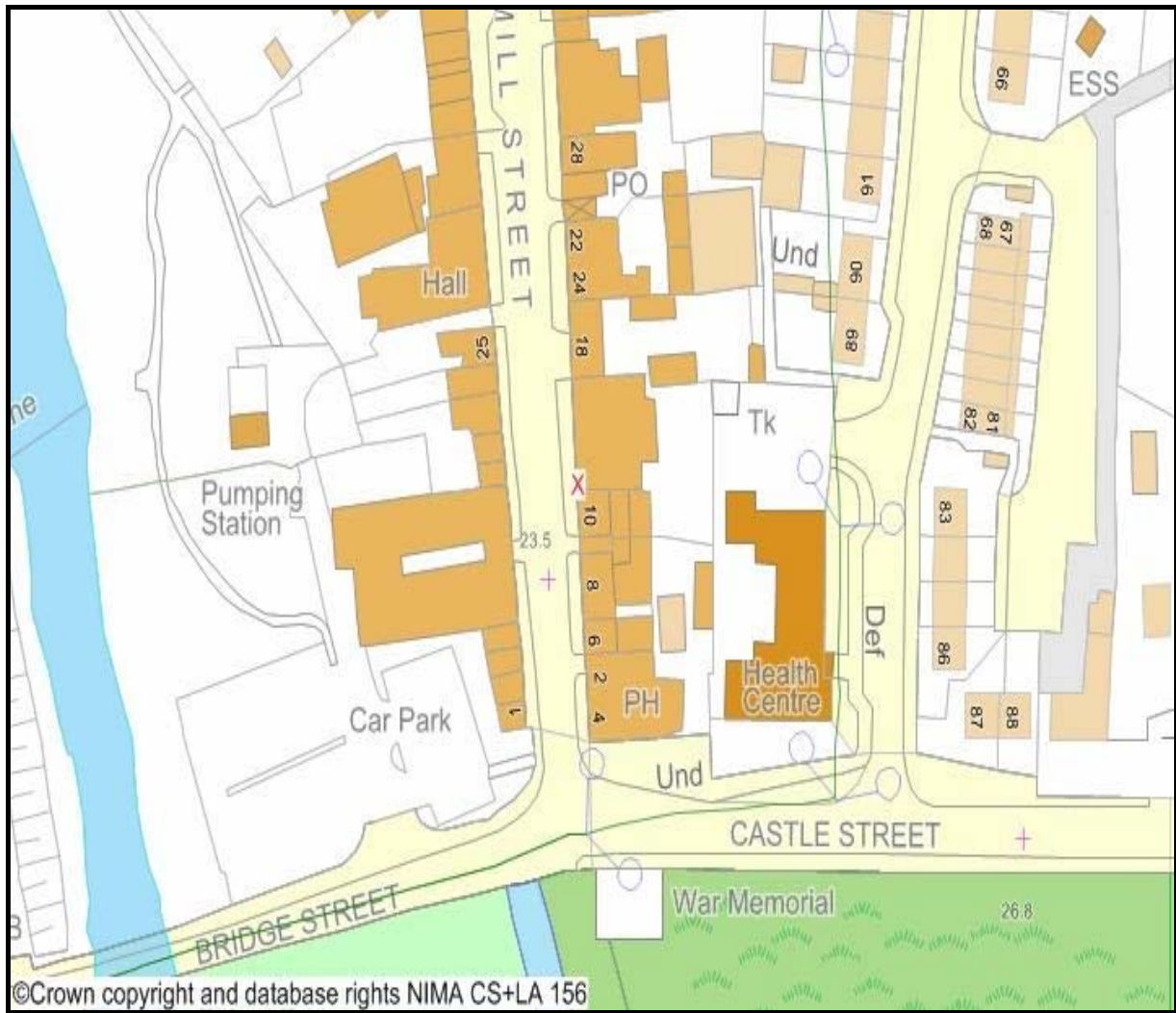
MAP 5

Site at Kenlis Street, Banbridge.



MAP 6

Site at Mill Street, Gilford



APPENDIX C

2009 NO₂ DIFFUSION TUBE MONITORING DATA

BANBRIDGE DISTRICT COUNCIL. BIAS ADJUSTED NO₂ RESULTS JANUARY 2009 - DECEMBER 2009							
Site no.	1	2	3	7	8	10	11
	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
Month							
January	NS	NS	NS	18	22	51	52
February	36	28	24	21	18	40	52
March	NS	NS	NS	16	17	41	49
April	40	39	43	12	17	41	51
May	29	33	28	9	12	29	32
June	35	45	44	8	36	3	44
July	23	32	25	8	8	26	33
August	21	33	27	8	9	33	36
September	36	34	27	13	10	30	46
October	38	37	41	14	14	37	43
November	36	37	36	15	14	43	48
December	55	52	50	23	19	41	49
Mean	35	37	35	14	16	35	45
Rmean	30	32	30	12	14	30	38
BIAS FACTOR 2009 - Gradko 0.86 (Cm/Dm)							
Site no.	Site Description	Location					
1	Roadside	Church Street, Dromore					
2	Roadside	Kenlis Street, Banbridge					
3	Roadside	Mill Street, Gilford					
7	Urban Background	Fortfield Drive, Dromore					
8	Urban Background	Springfields, Banbridge					
10	Roadside	Dromore Street, Banbridge					
11	Roadside	A1 By-pass, Dromore					
NS - No Sample							