South Holland District Council

Local Air Quality Management
Annual Progress Report 2008

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DOCUMENT INFORMATION AND CONTROL SHEET

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EXECUTIVE SUMMARY

Part IV of the Environment Act 1995 places a statutory duty on local authorities to review and assess the air quality within their area and take account of Government guidance when undertaking such work. This Progress Report is a requirement of the third round of review and assessment and is a requirement for all local authorities. The report is submitted within the permitted schedule of reporting - end of April 2008. The Report has been undertaken in accordance with the Progress Report Guidance LAQM.PRG(03).

This Progress Report considers all new monitoring data and assesses the data against the Air Quality Objectives. It also considers any development changes that may have an impact on air quality, as well as updating on any relevant strategy and policy changes.

South Holland District Council undertook the first round of review and assessment of air quality between 1998 and 2001 (Stages 1, 2 and 3). The Stage 2 report recommended further assessment of NO_2 and PM_{10} emissions in the Port Sutton Bridge Area and NO_2 emissions along the A17 at Holbeach and Sutton Bridge. The Stage 3 report concluded that predicted concentrations of NO_2 and PM_{10} would be met at these locations and no Air Quality Management Area (AQMA) was declared.

The first phase of the second round of review and assessment, the Updating and Screening Assessment (USA), was completed in August 2003 and this provided an update with respect to air quality issues within South Holland. The USA 2003 concluded that all air quality objectives were predicted to be met and no Detailed Assessment of air quality was required.

The first phase of the third round of review and assessment, the USA, was completed in June 2006 and this provided a further update with respect to air quality issues within South Holland. The USA 2006 concluded that all objectives were expected to be met and no Detailed Assessment was required. The 2007 Annual Progress Report considered the latest available 2006 monitoring data and concluded that a detailed assessment was not required.

Monitoring is currently undertaken for NO_2 and PM_{10} at two continuous monitoring sites at Monkhouse School in Spalding and at Westmere CP School near Sutton Bridge Power Station. South Holland District Council also monitors NO_2 at 11 diffusion tube sites in the District. The monitoring results for 2007 show no exceedences of the air quality objectives. Results show a reduction in pollutant concentrations at the majority of monitoring sites on 2006 levels.

There are no new or proposed developments or industrial processes identified since the 2007 Annual Progress Report which are likely to impact upon local air quality.

Based on the results of this Progress Report, there is no requirement for South Holland District Council to undertake a Detailed Assessment.

1 INTRODUCTION

1.1 Project Background

Part IV of the Environment Act, 1995, places a statutory duty on local authorities to periodically review and assess the air quality within their area. The Progress Report is a requirement of the third round of review and assessment of air quality for all local authorities, to be submitted by April 2008.

Bureau Veritas was commissioned by South Holland District Council, through the Lincolnshire Environmental Protection Liaison Group, to undertake their Annual Progress Report for 2008.

1.2 Summary of Review and Assessment

The Local Air Quality Management (LAQM) regime was first set down in the 1997 National Air Quality Strategy (NAQS)[1] and introduced the idea of local authority 'Review and Assessment'. Government subsequently published policy and technical guidance related to the review and assessment process in 1998. In 2000, Government reviewed the NAQS and set down a revised Air Quality Strategy for England, Scotland, Wales and Northern Ireland[2] (AQS). This set down a revised framework for air quality standards and objectives for seven pollutants, which were subsequently set in Regulation in 2000 through the Air Quality Regulations 2000[3]. These were subsequently amended in 2002[4].

The latest Air Quality Strategy (AQS) released in July 2007 provides the over-arching strategic framework for air quality in the UK and contains national air quality standards and objectives established by the Government to protect human health. The objectives for ten pollutants (benzene, 1,3-butadiene, carbon monoxide, lead, nitrogen dioxide, sulphur dioxide, particulates - PM_{10} and $PM_{2.5}$- and ozone) have been prescribed within the Air Quality Strategy based on The Air Quality Standards (England) Regulations 2007. The Objectives set out in the AQS for the protection of human health are presented in Table 1.1.

The First Round was a three-stage process, which assessed the sources of seven air pollutants of concern to health: benzene, 1,3 butadiene, carbon monoxide, lead, nitrogen dioxide (NO_2), fine particulates (PM_{10}) and sulphur dioxide. The Second Round commenced in 2003 with the Updating and Screening Assessment (USA). Similar to Stage One of the first round, there was consideration of the seven pollutants of concern to health and an assessment was made as to whether Air Quality Objectives for these pollutants would be met. The second phase (2004) involved local authorities undertaking a Detailed Assessment, where potential exceedences of Objectives were predicted, or an Annual Progress Report. In April 2005, all local authorities were required to submit an Annual Progress Report.

Technical Guidance (LAQM.TG (03))[5], Policy Guidance (LAQM.PG (03))[6] and Progress Report Guidance (LAQM.PRG (03))[7] were issued on behalf of Defra in 2003. This

[1] DoE (1997) The United Kingdom Nation Air Quality Strategy The Stationery Office
[2] DETR (2000) The Air Quality Strategy for England, Scotland, Wales and Northern Ireland – Working together for Clean Air, The Stationery Office
[3] DETR (2000) The Air Quality Regulations 2000, The Stationery Office
[4] Defra (2002) The Air Quality Strategy for England, Scotland, Wales and Northern Ireland: Addendum, The Stationery Office
[5] Defra (2003) Technical Guidance LAQM.TG(03), Part IV of the Environment Act 1995, Local Air Quality Management, The Stationery Office
[6] Defra (2003) Policy Guidance LAQM.PG(03), Part IV of the Environment Act 1995, Local Air Quality Management, The Stationery Office
[7] Defra (2003) Progress Report Guidance LAQM.PRG(2003), Part IV of the Environment Act 1995, Local Air Quality Management, The Stationary Office

guidance set the framework for the requirements of review and assessment for future years, taking account of experiences from the previous round of review and assessment.

The third round commenced in 2006. Similar to the second round, the Updating and Screening Assessment (USA) was the first phase, followed by a Detailed Assessment, where potential exceedences of Objectives were predicted, or an Annual Progress Report to be submitted by April 2007. In April 2008, all local authorities are required to submit an Annual Progress Report.

Table 1.1 UK Air Quality Standards and Objectives

Pollutant	Objective	Concentration measured as	Date to be achieved by and maintained thereafter
Benzene	16.25 μg/m^3	running annual mean	31st December 2003
	5 μg/m^3	running annual mean	31st December 2010
1,3-Butadiene	2.25 μg/m^3	running annual mean	31st December 2003
Carbon monoxide	10 mg/m^3	maximum daily running 8 hour mean	31st December 2003
Lead	0.5 μg/m^3	annual mean	31st December 2004
	0.25 μg/m^3	annual mean	31st December 2008
Nitrogen dioxide	200 μg/m^3, not to be exceeded more than 18 times a year	hourly mean	31st December 2005
	40 μg/m^3	annual mean	31st December 2005
Particles (PM_{10})	50 μg/m^3, not to be exceeded more than 35 times a year	24 hour mean	31st December 2004
	40 μg/m^3	annual mean	31st December 2004
Particles ($PM_{2.5}$)[a]	25 μg/m^3	Annual mean	2020
	Target of 15% reduction in concentrations at urban background[8]	annual mean	In urban areas between 2010 and 2020
Sulphur dioxide	266 μg/m^3, not to be exceeded more than 35 times a year	15 minute mean	31st December 2005
	350 μg/m^3, not to be exceeded more than 24 times a year	hourly mean	31st December 2004
	125 μg/m^3, not to be exceeded more than 3 times a year	24 hour mean	31st December 2004
Polycyclic aromatic hydrocarbons[a]	0.25 ng/m^3 B(a)P[9]	Annual average	31st December 2010
Ozone[a]	100 μg/m^3, not to be exceeded more than 10 times a year	8 hour mean	31 December 2005

[a] Not prescribed for Local Air Quality Management

[8] 25 μg/m^3 is a concentration cap combined with 15% reduction
[9] Benzo(a)Pyrene

1.3 Scope and Methodology of the Progress Report

Progress Reports have been introduced into the review and assessment process to provide greater continuity and a longer-term vision to local air quality management. The overall aims of Progress Reports are to report progress on local air quality management within a local authority's area and progress in achieving the Air Quality Objectives.

The Progress Report will allow air quality monitoring data, and any changes to development within an area that may impact on air quality, to be assessed on a regular basis and provide an early indication of whether measures are required to improve air quality. Where there are risks identified that Air Quality Objectives may not be met, then a Detailed Assessment of air quality will be required.

To undertake the Progress Report, new monitoring data should be collated for sites within the authority's area. Where there are longer term monitoring sites (normally considered as 5 years or longer) evidence of trends should also be considered.

Data has also been collated on any local development changes to provide an update on any new local developments that may affect air quality e.g. industry, developments granted (or applying for) planning permission, or traffic management schemes.

An update is also provided on existing developments where further information has become available e.g. industrial upgrade programmes, emissions monitoring results, or recent complaints.

Where air quality action plans or strategies have been adopted, progress on any measures undertaken is reported. There is also an update on any planning policies and local transport plan (LTP) measures that may affect air quality.

The Progress Report will be reported in the following order in accordance with the checklist provided in the Progress Report Guidance (LAQM. PRG (03)).

1. **New Monitoring Results**
2. **New Local Developments**
3. **Action Plan/Local Air Quality Strategy**
4. **Planning and Policies**
5. **Local Transport Plan and Strategies**

1.4 Summary of Review and Assessment for South Holland District Council

South Holland District Council undertook the first round of review and assessment of air quality between 1998 and 2001 (Stages 1, 2 and 3). The Stage 2 report recommended further assessment of NO_2 and PM_{10} emissions in the Port Sutton Bridge Area and NO_2 emissions along the A17 at Holbeach and Sutton Bridge. The Stage 3 report concluded that predicted concentrations of NO_2 and PM_{10} would be met at these locations and no Air Quality Management Area was declared. The conclusions of the First Round were that all Air Quality Objectives were expected to be met by the target dates based on the available information at that time.

The first phase of the second round of review and assessment, the Updating and Screening Assessment (USA), was completed in August 2003 and this provided an update with respect to air quality issues within South Holland. The USA 2003 concluded that no Detailed Assessment of air quality was required. All Air Quality Objectives were expected to be met. The Progress Reports 2004 and 2005 similarly concluded that all Objectives were expected to be met. A new continuous monitoring site was established in 2003 at Monks House School in Spalding to monitor PM_{10} and NO_2 concentrations, and assess emissions from Spalding Power Station.

The first phase of the third round of review and assessment, the USA, was completed in June 2006 and this provided a further update with respect to air quality issues within South Holland. The USA 2006 concluded that all objectives were expected to be met and no Detailed Assessment was required.

In April 2007, South Holland District Council submitted their 2007 Annual Progress Report for air quality. The report considered the latest (2006) monitoring data and concluded that no significant changes in pollutant concentrations had occurred and there were no predicted exceedences of air quality objectives.

2 NEW MONITORING RESULTS

2.1 Continuous monitoring data

South Holland District Council currently operates two air quality monitoring stations in the district; one at a background site at Westmere CP School (grid reference x=547264, y=321709) and a second at a background site at Monks House School in Spalding (grid reference x=523168, y=322454). The Westmere site was installed in 1998 to monitor emissions from Sutton Bridge Power Station. The Monks House site was installed in 2003 to monitor emissions from the Spalding Power Station.

A third continuous air quality monitoring station was operated by South Holland District Council from 2000 to 2004 at Petts Lane in Sutton Bridge (grid reference x=548451, y=322411). This was an industrial background site installed at a location where fugitive dust emissions for the port were identified during Stage 2 of the first round of review and assessment. The results showed continued compliance with the PM_{10} objectives.

NO_2 concentrations are measured using an API chemiluminescent analyser and PM_{10} concentrations are monitored using a Tapered Element Oscillating Microbalance (TEOM). The stations are calibrated on a fortnightly basis in-house and these calibration results are forwarded to AEA Energy and Environment (AEA) who ratify the data. The quality assurance/quality control (QA/QC) procedures are equivalent to the UK Automatic Urban and Rural Network (AURN) procedures. South Holland District Council subscribes to the AEA air quality calibration club and as a result the site is audited on a six monthly basis. The manufacturer, Enviro Technology, service the stations on a six monthly routine basis.

The results for these stations are shown in Table 2.1 and Figures 2.1 and 2.2. The results show that there are no exceedences of the NO_2 and PM_{10} Objectives at these sites. The results show a decreasing trend with time for NO_2 at these background sites. PM_{10} concentrations have increased on 2006 levels.

Table 2.1 SHDC Continuous Monitoring Results 2001 - 2007

Location	X	Y	Year	PM_{10} annual mean µg/m^3	No. days > 50 µg/m^3	% data capture PM_{10}	NO_2 annual mean µg/m^3	No. hours > 200µg/m^3	% data capture NO_2
Westmere School	547264	321709	2001	18.3	3	97	16.6	0	94
Westmere School	547264	321709	2002	19.6	3	96	14.7	0	96
Westmere School	547264	321709	2003	21.8	9	96	17.3	0	95
Westmere School	547264	321709	2004	20.1	2	99	15.9	0	99
Westmere School	547264	321709	2005	19.2	0	95	14.9	0	93
Westmere School	547264	321709	2006	14.8	0	99	14.8	0	98
Westmere School	547564	321709	2007	18.8	3	98	14.5	0	96
Monks House School	523168	322454	2003	22.0	4	61	16.0	0	61
Monks House School	523168	322454	2004	21.0	2	98	17.5	0	96
Monks House School	523168	322454	2005	20.5	0	94	14.5	0	90
Monks House School	523168	322454	2006	16.4	0	99	13.8	0	97
Monks House School	523168	322454	2007	20.4	7	70	8.4	0	77

**TEOM results have been factored by 1.3. NB 2007 data has been provisionally ratified.*

Figure 2.1 NO_2 Continuous Monitoring Trends, 2001 - 2007

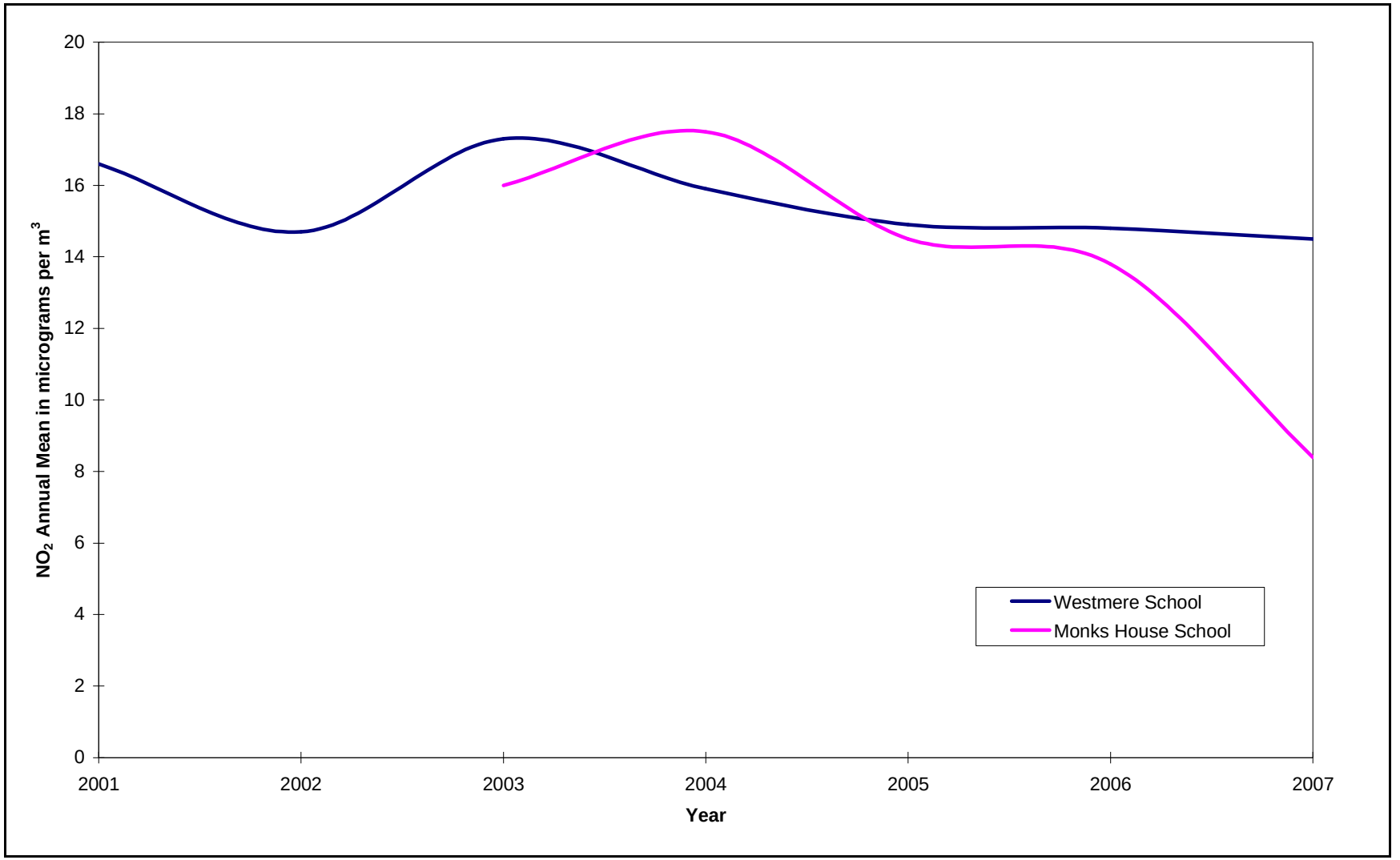
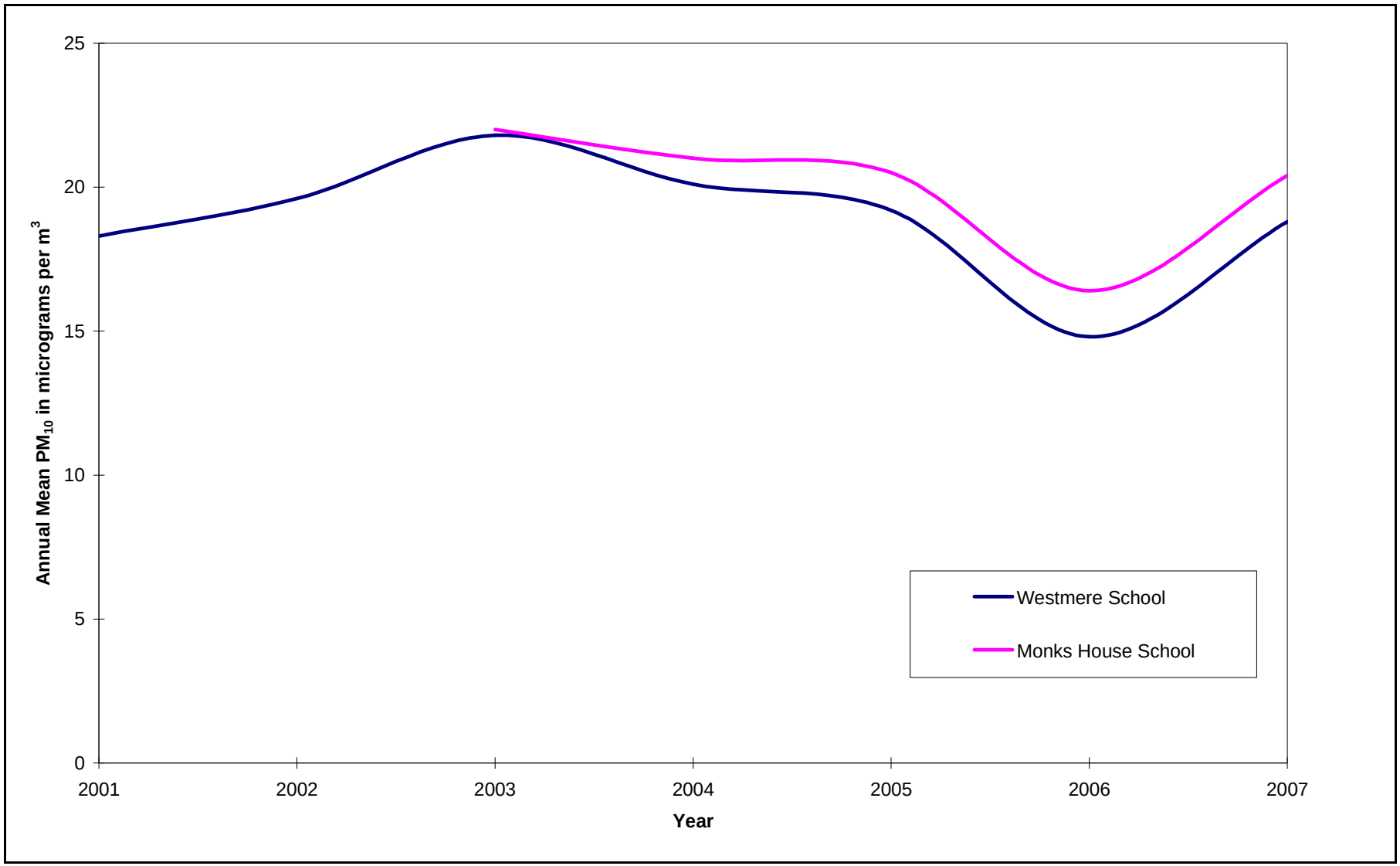


Figure 2.2 PM_{10} Continuous Monitoring Trends, 2001 - 2007



2.2 Passive monitoring data

Monitoring for NO_2 has been undertaken in South Holland at 3 sites in Holbeach and Crowland using passive diffusion tubes since 1994 and this has been expanded to 11 diffusion tube sites since the first round of review and assessment. Figure 2.5 shows the location of the diffusion tube and continuous monitoring sites in South Holland.

The tubes are prepared and analysed by Gradko International Limited using the 50% TEA[10] in acetone method. Gradko International participates in the UK National Diffusion Tube Network and the Workplace Analysis Scheme for Efficiency (WASP). They currently hold UKAS accreditation for analysis of diffusion tubes and consistently achieve the highest performance level in annual field inter-laboratory performance comparisons.

The tubes prior to 2002 (i.e. 1994 to 2001) were prepared and analysed by Humberside County Scientific Services (HCSS). HCSS participate in the Workplace Analysis Scheme for Proficiency (WASP) and the annual NO_2 UK Field Inter-comparison Exercises (UKFIE) run by AEA Energy and Environment. Co-location of triplicate tubes with the continuous analyser at Westmere School, Sutton Bridge (Stage 3 Report) showed the HCCS tubes were under reading by 1.14. This factor has been applied to HCSS data (Table 2.4), as it is more precautionary than the UKFIE bias factor for this laboratory.

With regard to the application of a bias adjustment factor for the diffusion tubes, the technical guidance LAQM.TG (03) and Review and Assessment Helpdesk[11] recommends use of a local bias adjustment factor where available and relevant to diffusion tube sites. Co-location of triplicate diffusion tubes at the continuous analyser site at Westmere School, Sutton Bridge has provided local bias adjustment factors which have been applied to the relevant year's data. The local bias correction factors for 2002 - 2007 are shown in Table 2.2. The corrected NO_2 diffusion tube results are shown in Table 2.3 and Table 2.4. The results show that there are no exceedences in 2007 at any of the sites. Monitoring trends between 2003 and 2007 are displayed graphically in Figure 2.3.

There are 3 sites in District, which have been operating since 1994, and therefore consideration can be made of long-term trends within the area. The results as shown in Table 2.4 and Figure 2.4 show that there is variability from year to year; reflecting the differing meteorological conditions between years and uncertainties in bias adjustment factors. The overall trend at both the roadside and background sites is that NO_2 annual mean concentrations are reducing with time, as expected with the introduction of National policy measures.

Table 2.2 NO_2 Local Bias Adjustment Factors

Year	2002	2003	2004	2005	2006	2007
Bias Adjustment	0.6	1.13	1.24	1.09	1.10	0.99

[10] TEA = Triethanolamine
[11] www.uwe.ac.uk/aqm/review

Table 2.3 SHDC Nitrogen Dioxide Diffusion Tube Data 2003 - 2007 in µg/m^3

Site No	X	Y	Site Type	NO_2 Annual mean bias corrected 2003	NO_2 Annual mean bias corrected 2004	NO_2 Annual mean bias corrected 2005	NO_2 Annual mean bias corrected 2006	NO_2 Annual mean bias corrected 2007
Millfield Gardens	524388	310520	Background	18.3	18.3	15.9	15.9	13.5
The Hollies	536523	325078	Background	19.6	18.1	16.2	15.6	16.1
Field End (A17)	541013	324393	Roadside	24.0	24.6	21.1	21.9	22.7
Metalair	547957	321013	Roadside	26.9	25.1	23.7	25.8	20.6
Nutten Stoven (B1168)	535595	325453	Kerbside	18.5	20.4	17.0	16.4	16.3
Priory Road, Spalding	524734	322403	Background	22.9	24.4	20.4	20.4	19.9
Station Road (A16)	526585	328726	Roadside	23.1	25.5	21.7	18.6	19.4
Westmere CP School*	547264	321709	Background	16.7	17.3	14.9	14.9	14.6
A17/B1168 Boston Road	535525	325589	Kerbside	-	-	40.7	36.2	31.9
Pinchbeck Road	524595	323793	Kerbside	-	-	33.7	32.4	30.6
Springfields Roundabout	526309	323820	Kerbside	-	-	32.4	27.5	28.5

**Triplicate diffusion tube site*

Table 2.4 SHDC NO_2 concentrations in µg/m^3 at Long-Term Diffusion Tube Sites

Location	Type	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Nutten Stoven (B1168)	Kerbside	35.3	30.8	30.8	30.8	26.0	25.0	23.6	21.5	16.7	18.5	20.4	17.0	16.4	16.3
The Hollies	Background	37.6	33.1	30.8	26.2	27.9	23.1	21.3	22.3	15.5	19.6	18.1	16.2	15.6	16.1
Millfield Gardens	Background	33.1	33.1	28.5	28.5	27.9	24.3	24.8	19.1	14.7	18.3	18.3	15.9	15.9	13.5

Figure 2.3 South Holland District Council NO_2 Diffusion Tube Site Trends 2003 – 2007

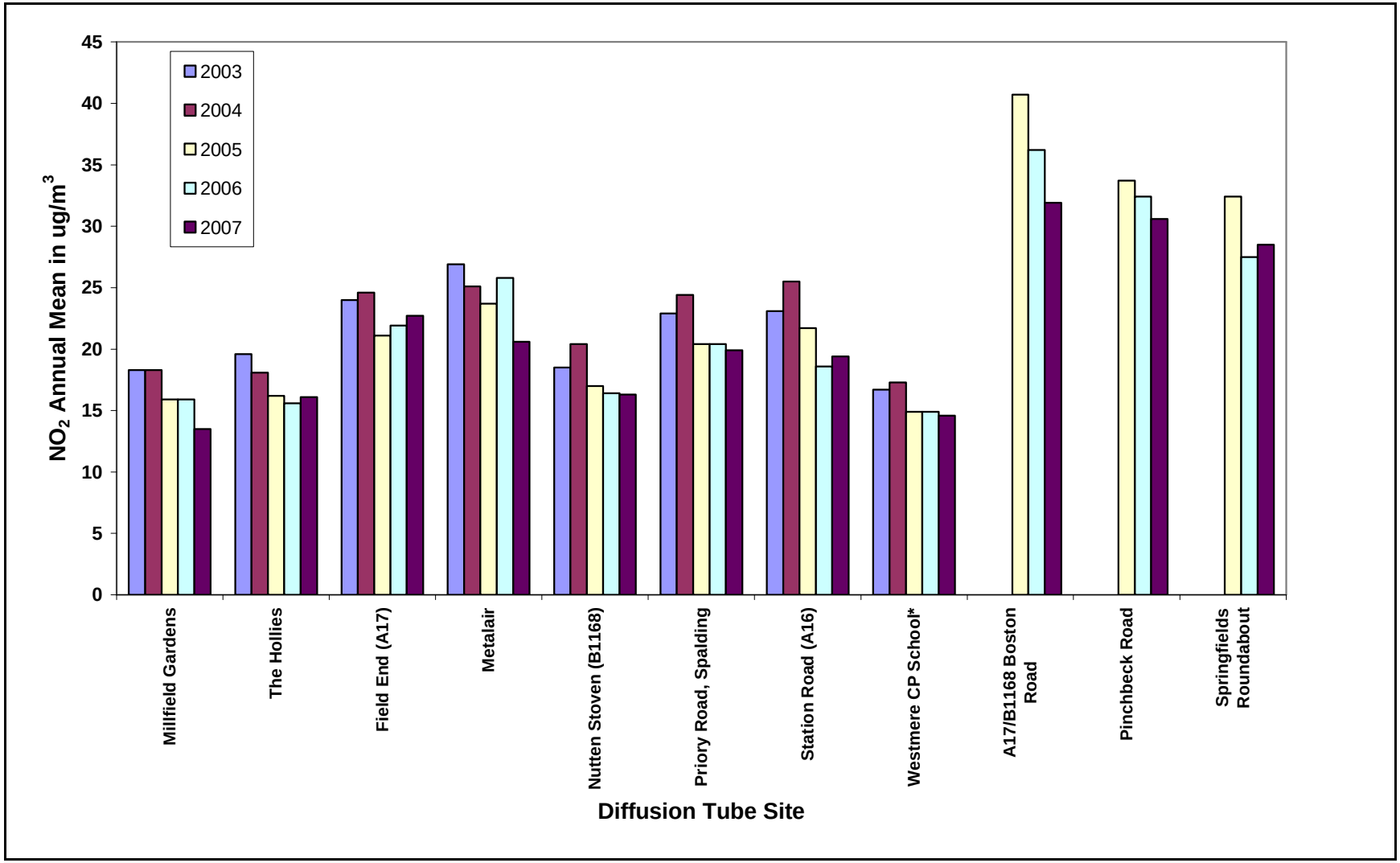


Figure 2.4 South Holland District Council Long-Term NO_2 Diffusion Tube Site Trends 1994-2007

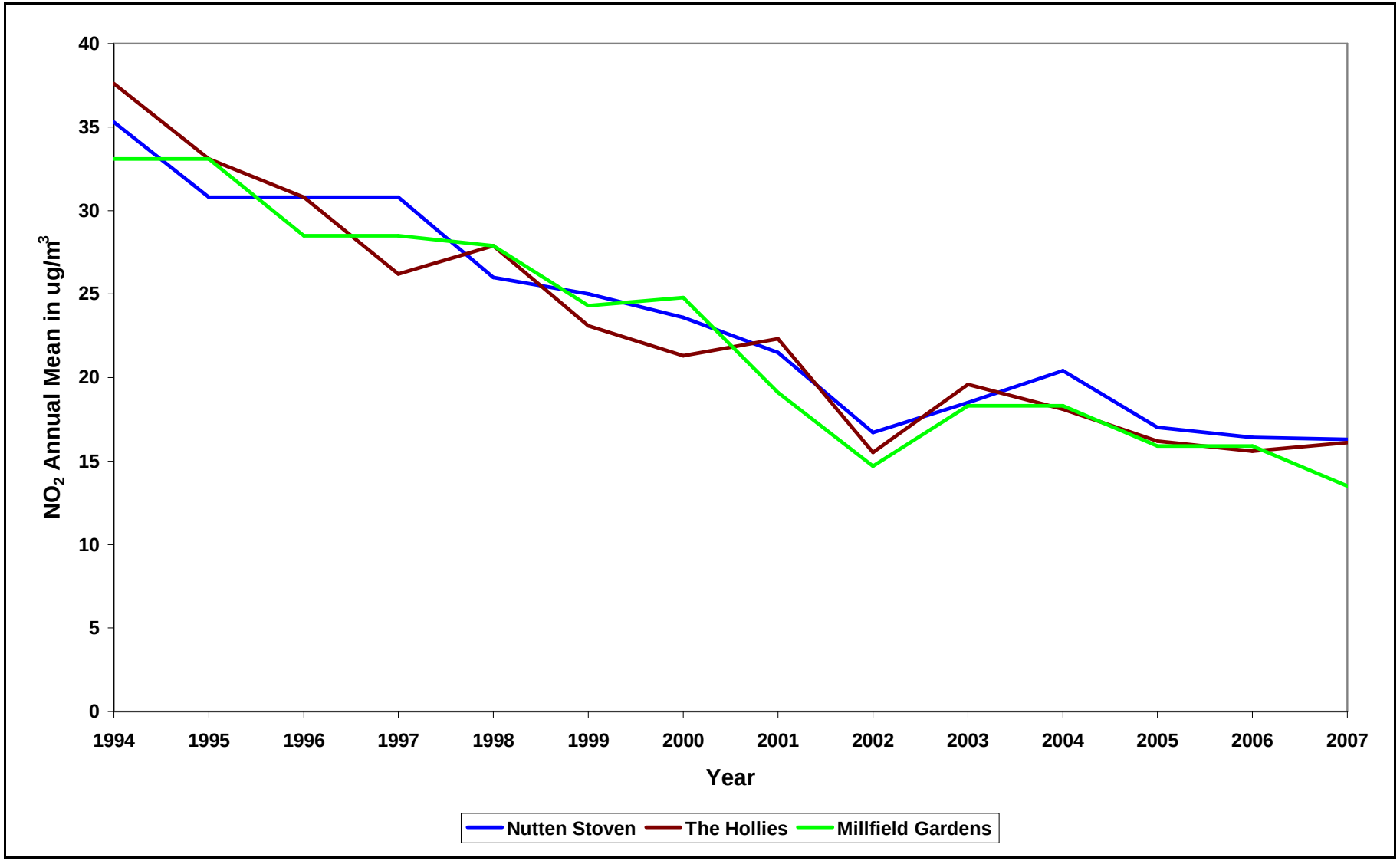
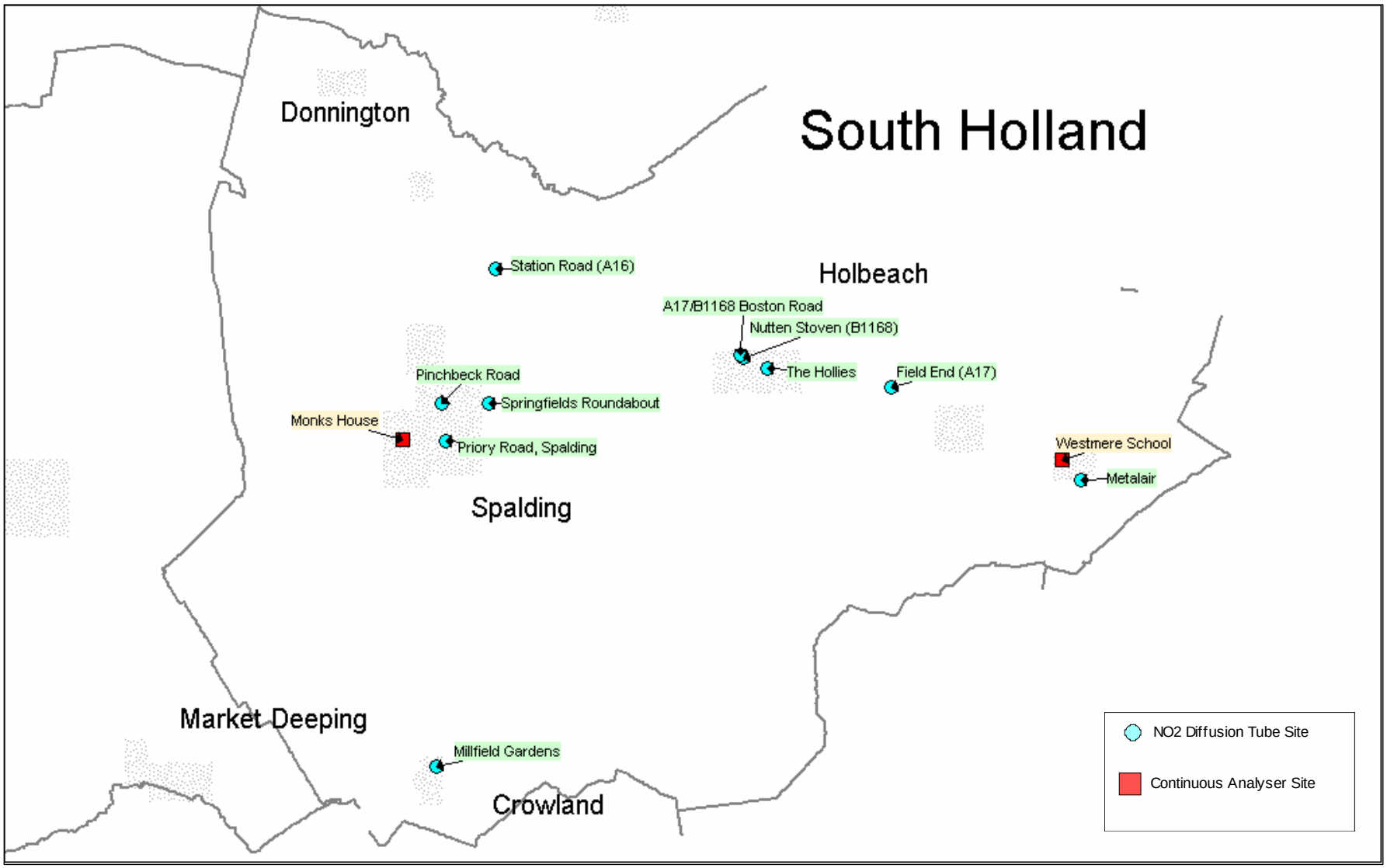


Figure 2.5 Map of Monitoring Sites in the District of South Holland



3 NEW LOCAL DEVELOPMENTS

3.1 New Industrial Processes

There are no new industrial processes (as included in the list in Appendix 2 of the Technical Guidance LAQM.TG (03)) in the District since the update provided in the Progress Report 2007.

There are also no new landfill sites, quarries or other sources of fugitive emissions of PM_{10}, which have nearby relevant exposure.

3.2 New Developments

There have been no new developments granted planning permission (or which are awaiting consent) expected to have a significant impact on local air quality.

4 UPDATE ON POLICIES AND MEASURES TO IMPROVE AIR QUALITY

4.1 Air Quality Action Plan / Local Air Quality Strategy

South Holland District Council has not declared any Air Quality Management Areas and therefore there has been no requirement to draw up any Air Quality Action Plans as all Objectives are expected to be met.

LAQM Policy Guidance recommends that local authorities draw up Local Air Quality Strategies to provide a framework for air quality over the long-term and allow air quality to be taken into account in the wider policy areas, such as land-use and transport planning and regeneration. South Holland District Council has not developed a Local Air Quality Strategy to date. The Council does, however, continue to work in partnership with other Lincolnshire authorities on regional air quality issues through the Lincolnshire Environmental Protection Liaison Group.

4.2 Planning and Policies

The South Holland District Council Local Plan (adopted July 2006) contains the following policy in relation to air pollution.

Policy SG13 - Pollution and Contamination

"Planning permission will only be permitted for development proposals which:

1) do not cause unacceptable levels of pollution of the surrounding area by noise, light, toxic or offensive odour, airborne pollutants or by the release of waste products;

2) provide, as necessary, appropriate treatment of land to clean up pollution and contamination."

The South Holland District Council Local Plan sets out the planning policies which will guide and control new development in the District until 2021.

The Planning and Compulsory Purchase Act 2004 identifies a number of revisions to the planning process and in particular a new approach to the preparation of development plans. The system of Structure and Local Plans has been replaced. The new system introduces Local Development Frameworks (LDF) to replace Local Plans; Structure Plans will be abolished, whilst a Regional Spatial Strategy is to be prepared which will replace Regional Planning Guidance. Under the new planning system the statutory development plan for the District will therefore consist of the following:

- Regional Spatial Strategy (RSS8) for the East Midlands prepared by East Midlands Regional Assembly
- Local Development Framework (LDF) prepared by the District Council

To date the Council has produced a Local Development Scheme (LDS), which is a project plan setting out what new documents will be produced and the timetable for their production. In addition a Statement of Community involvement was adopted by the Council in December 2006 which outlines how the Council intends to ensure that all sections of the community have the opportunity to participate in the planning process. During the preparation of the LDF, the Local Plan policies will be saved.

4.3 Local Transport Plan and Strategies

South Holland District Council works together with Lincolnshire County Council on local transport issues including the implementation of Local Transport Plan (LTP) measures in the district.

Relevant strategies and initiatives within the 2nd LTP (2005/6 – 2010/11), which have potentially beneficial impacts on air pollution from transport sources, through reduction in traffic congestion and modal shift, include:

- **Community Travel Zones**

Community Travel Zones (Rural Priorities Initiative in rural areas) is aimed at reducing congestion and improving safety by providing promotion of and improvements to walking, cycling and public transport infrastructure. Measures aimed at achieving this include footway schemes, pedestrian crossing improvements, cycleways, street lighting and traffic calming initiatives. The 2nd LTP prioritises rolling out such initiatives in a number of urban areas including Spalding.

- **Improvements to Public Transport**

The 2nd LTP has identified three priority areas for detailed accessibility assessments. Boston and South Holland Fenland is ranked 2nd highest priority for such an assessment. Planned improvements to public transport in South Holland focus upon the establishment of InterConnect bus routes linking Spalding, Donnington, and Boston.

- **Parking Enforcement**

Investigations continue into the introduction of Civil (formerly Decriminalised) Parking Enforcement across the County.

- **School Travel Plans**

Some 75% of all Lincolnshire schools now have an approved School Travel Plan (at 31.03.07) and as a result have benefited from some £1.7m of government grants to help implement the plans. This has been used on a variety of projects, including cycle storage, pedestrian shelters and new entrances for cyclists and pedestrians. Across the county, surveys suggest that the trend in the growth of car use has now halted and there are examples of where this is now declining.

5 CONCLUSION AND RECOMMENDATIONS

The Progress Report has provided an update on air quality monitoring and local developments in accordance with the Guidance LAQM.PRG(03).

The Report has compared the new 2007 monitoring data against the relevant Air Quality Objectives and there have been no exceedences of Air Quality Objectives.

It is recommended that the current monitoring network be continued to provide additional information in support of future review and assessment work.

There are no new or proposed developments or industrial processes identified since the previous Annual Progress Report which are likely to impact upon local air quality.

Based on the results of this Progress Report, there is no requirement for South Holland District Council to undertake a Detailed Assessment.

APPENDIX 1 CALCULATION OF BIAS ADJUSTMENT

Start Date dd/mm/yyyy	**End Date** dd/mm/yyyy	**Diffusion Tube 1** *µgm^{-3}*	**Diffusion Tube 2** *µgm^{-3}*	**Diffusion Tube 3** *µgm^{-3}*	**Triplicate Mean**	**Standard Deviation**	**Coefficient of Variation (CV)**	**95% CI of mean**	**Continuous Analyser Period Mean**	**Data Capture (DC)**	**Diffusion Tubes Precision Check**	**Automatic Monitor Data Capture Check**
02/01/07	02/02/07	17	18	19	18	1	3	2	14	100%	Good	Good
02/02/07	27/02/07		19	20	19	1	5	9	24	100%	Good	Good
27/02/07	10/04/07	15	12	13	14	1	10	4	16	100%	Good	Good
10/04/07	02/05/07	11	10	9	10	1	8	2	11	98%	Good	Good
02/05/07	30/05/07	10	9	10	10	1	8	2	9	97%	Good	Good
30/05/07	06/07/07	7	7	9	8	1	12	2	8	68%	Good	Poor Data Capture
06/07/07	31/07/07		10	10	10	0	3	3	9	100%	Good	Good
31/07/07	29/08/07	11	16	9	12	4	31	9	11	99%	Poor Precision	Good
29/08/07	04/10/07		14	13	14	0	3	4	12	99%	Good	Good
04/10/07	02/11/07		18	19	18	1	6	9	21	100%	Good	Good
02/11/07	29/11/07	25	25	23	24	1	3	2	21	99%	Good	Good
29/11/07	02/01/08	20	19	20	20	1	4	2	18	94%	Good	Good

Diffusion Tubes Mean:	16 µgm^3
Mean CV (Precision):	5
Automatic Mean:	16 µgm^3
Data Capture for periods used:	99%
Adjusted Tubes Mean	16 +/-2 µgm^3
Bias factor A	0.992 +/- 0.114
Bias B	3 +/- 11 %
Bias calculated using 10 periods of data	