Breckland Council
Annual Status Report 2018

Bureau Veritas

August 2018

Move Forward with Confidence

Document Control Sheet

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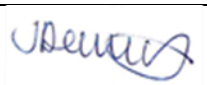
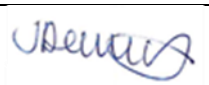
Signature		
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2018 Air Quality Annual Status Report (ASR)

In fulfilment of Part IV of the Environment Act 1995 Local Air Quality Management

August 2018

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Executive Summary: Air Quality in Our Area

Air Quality in Breckland

Air pollution is associated with a number of adverse health impacts. It is recognised as a contributing factor in the onset of heart disease and cancer. Additionally, air pollution particularly affects the most vulnerable in society: children and older people, and those with heart and lung conditions. There is also often a strong correlation with equalities issues, because areas with poor air quality are also often the less affluent areas[1,2].

The annual health cost to society of the impacts of particulate matter alone in the UK is estimated to be around £16 billion[3].

The District of Breckland is approximately 500 square miles of mostly rural areas and comprises the principal market towns of Attleborough, Dereham, Swaffham, Thetford and Watton. The district has a fairly low population density with 130k residents recorded in the 2011 census[4]. The main source of air pollution within the District is found in Swaffham, where the A1065 runs through the centre of the town and is the main route for both local traffic and for traffic travelling to North Norfolk. The layout of the town leads to frequent traffic congestion and this leads to elevated concentrations of NO_2. Over the past few years these concentrations have hovered mostly above, but occasionally below, the Annual Objective of 40ug/m^3. Previous AQ reports with full details of all monitoring and results can be found on the Council website with this link http://www.breckland.gov.uk/article/3244/Air-Pollution.

There is currently one Air Quality Management Area (AQMA) designated within Breckland DC; AQMA No.2 within Swaffham spans the main vehicular route in the town centre, around the A1065. The current AQMA has been declared due to exceedances of the NO_2 annual mean, the boundaries of the AQMA can be seen in Appendix D and online at https://uk-air.defra.gov.uk/aqma/local-authorities?la_id=32.

During 2017, Breckland Council monitored NO_2 using thirty passive NO_2 diffusion tubes and two automatic monitoring locations at twenty six separate locations. There

[1] Environmental equity, air quality, socioeconomic status and respiratory health, 2010
[2] Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006
[3] Defra. Abatement cost guidance for valuing changes in air quality, May 2013
[4] https://www.breckland.gov.uk/media/7891/Authorities-Monitoring.../AMR_2017.pdf

were two co-located triplicate tubes at each of the automatic sites. The NO_2 diffusion tube network is in place to monitor NO_2 concentrations across the District, monitoring at known hotspot areas and also being used to identify any new sensitive areas. Across the entire diffusion tube network, over the last five years, NO_2 concentrations have decreased and no exceedances were reported in 2017. NO_2 concentrations decreased at 28 of the 30 diffusion tubes reported when comparing 2017 with 2016 values.

Actions to Improve Air Quality

With regard to the National Planning Policy Framework, air quality considerations have been adopted across the district when dealing with planning applications and the provision of pre-application advice. In 2017, an Air Quality Development Management Policy was implemented as part of the Air Quality Planning and Policy Guidance classification.

Working with our NCC partners we have been looking at ways to improve traffic flow in the town. Very simply, reducing congestion will to some extent reduce emissions and improve air quality. With a view to this, the traffic lights in central Swaffham were re-phased in 2014 but this was not noticeably effective. After further discussions, Breckland Council commissioned a report from NCC to assess the feasibility of changing the road layout to improve traffic flow. Modelling of the various options predicted a reduction in all oxides of nitrogen (NO_x) of up to 25%. This is not the same as NO_2. Reduction in NO_2 would be significantly less than this but may still be sufficient to avoid exceedances of the Annual Mean Objective. These options would incur significant cost and require further detailed work to fully assess whether implementation is possible. Unfortunately we were unsuccessful in a joint bid with NCC in 2017 for Defra Funds to finance further work on this. Following the declaration of the AQMA in 2017 in Swaffham, a draft Air Quality Action Plan (AQAP) was produced and expected to be published in 2018. Improvements in traffic queueing and delays are a strong focus in the AQAP, with proposed removal of the traffic lights on the Station Street/Mangate Street junction, encouragement of public transport use and review of car parking enforcement and the town centre one-way system.

Conclusions and Priorities

This year's ASR is an update of the monitoring carried out last year and illustrates that there is an improvement across the district, including Swaffham following the May 2017 AQMA declaration. With the publication of the AQAP expected in Autumn 2018, this will assist in the continuation of NO_2 reduction across Breckland. A number of housing developments have been submitted in 2017 however have not yet been approved. If any developments do go ahead in 2018, this will be discussed within next year's report in comparison to the monitoring results.

Local Engagement and How to get Involved

As part of the ongoing AQMA process, ahead of the publication of the AQAP in 2018 and from the 2017 public forums discussing the improvements of the district's air quality, we welcome the continuous suggestions from residents, local business and interest groups in order to improve air quality in the area. We have further met with local and regional organisations and Councils to ensure that we are in touch with local concerns and are better placed to explore potential solutions.

Find out more about your local air quality by;

- Contacting the Air Quality officer at Breckland (details at the beginning of this report) or email envprotect@breckland.gov.uk
- Contact your local councillor with any concerns http://democracy.breckland.gov.uk/mgMemberIndex.aspx?FN=ALPHA&VW=LIST&PIC=0
- Consider how and when you use your car, especially at peak times. Consider using public transport where possible for trips into towns and walking or cycling for a non-polluting and healthy alternative.

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1 Local Air Quality Management

This report provides an overview of air quality in Breckland District Council (BDC) during 2017. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995) and the relevant Policy and Technical Guidance documents.

The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved. Where an exceedance is considered likely the local authority must declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in pursuit of the objectives. This Annual Status Report (ASR) is an annual requirement showing the strategies employed by BDC to improve air quality and any progress that has been made.

The statutory air quality objectives applicable to LAQM in England can be found in Table E.1 in Appendix E.

2 Actions to Improve Air Quality

2.1 Air Quality Management Areas

Air Quality Management Areas (AQMAs) are declared when there is an exceedance or likely exceedance of an air quality objective. After declaration, the authority must prepare an Air Quality Action Plan (AQAP) within 12-18 months setting out measures it intends to put in place in pursuit of compliance with the objectives.

A summary of the AQMAs declared by the Council can be found in Table 2.1. Further information related to declared or revoked AQMAs, including maps of AQMA boundaries are available online at https://uk-air.defra.gov.uk/aqma/local-authorities?la_id=32 (see full list at http://uk-air.defra.gov.uk/aqma/list). Alternatively, see Appendix D: Maps of Monitoring Locations and AQMAs, which provides a map of the air quality monitoring locations in relation to the AQMA under Figure D.4.

Table 2.1 – Declared Air Quality Management Areas

AQMA Name	Date of Declaration	Pollutants and Air Quality Objectives	City / Town	One Line Description	Is air quality in the AQMA influenced by roads controlled by Highways England?	Level of Exceedance (maximum monitored/modelled concentration at a location of relevant exposure)				Action Plan		
						At Declaration		Now		Name	Date of Publication	Link
Breckland District Council Air Quality Management Area number 2 Order 2017	Declared 1 May 2017	NO_2 Annual Mean	Swaffham	An area encompassing a number of residential properties in Station Street and London Road, Swaffham	No	**41.0**	µg/m3	34.7	µg/m3	AP01/18	Draft 15/05/18	Expected Autumn 2018

☒ **Breckland District Council confirm the information on UK-Air regarding their AQMA(s) is up to date**

2.2 Progress and Impact of Measures to address Air Quality in Breckland

Defra's appraisal of last year's ASR concluded that the draft Air Quality Action Plan (AQAP) for the declared AQMA in Swaffham (declared May 2017) should be consulted in line with the LAQM TG (16) guidance as best practice and submitted to Defra upon completion as part of the statutory consultation. It was further advised to the council to develop KPIs and a reduction in pollution targets to allow ease of assessment when measuring the AQAP's effectiveness. The map that illustrates the AQMA boundary was recommended to include the monitoring sites contained within it and the Air Quality Objective (AQO) of 40µg/m^3 was requested to be included as part of the monitoring sites' results graph for comparison. It is further requested within the appraisal document from last year's ASR that progress made surrounding public awareness and collaboration with public health colleagues, with a view to reducing exposure to NO_2, is reported.

BDC has taken forward a number of direct measures during the current reporting year of 2017 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 2.2.

More detail on these measures can be found in their respective Action Plan which is currently drafted and expected to be published in Autumn 2018. A key completed measure thus far concerns the inclusion of air quality considerations in local planning policy together with the adoption of an air quality development management policy.

BDC expects the following measures to be completed over the course of the next reporting year:

- The inclusion of air quality considerations when determining planning applications;
- The inclusion of air quality as a topic in the Neighbourhood Plan and future Local Plan documents;
- Improvements in the bus network for Breckland and implementation of a public cycle hire scheme.

BDC's priorities for the coming year are to review the current town centre parking arrangements to minimise traffic flow in sensitive areas, review and prevent any

habitual illegal or bad parking on Station Street that hinders the traffic flow, promote road safety and eco-driving awareness, investigate Green Space initiatives and promote low emission transport such as bicycles together with improvements to emission standards across bus fleet operators.

Whilst the measures stated above and in Table 2.2 will help to contribute towards compliance, BDC anticipates that further additional measures not yet prescribed will be required in subsequent years to achieve compliance and enable the revocation of the Swaffham AQMA.

Table 2.2 – Progress on Measures to Improve Air Quality

Measure No.	Measure	EU Category	EU Classification	Organisations involved and Funding Source	Planning Phase	Implementation Phase	Key Performance Indicator	Reduction in Pollutant / Emission from Measure	Progress to Date	Estimated / Actual Completion Date	Comments / Barriers to implementation
1	Consideration of Air Quality Impacts when providing comments on planning applications within an AQMA or where an AQMA could be impacted or created.	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	District Council (LPA & Env Protection Team)	Ongoing	Ongoing	Number of pre application discussions and planning applications	1µg/m3	Ongoing	Not Confirmed	Not Confirmed
2	With regard to National Planning Policy Framework, include air quality considerations in the Local Plans and adopt an air quality Developme nt	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	District Council (LPA & Env Protection Team)	Completed	2017	Production of documents	1µg/m3	Complete	Complete	Not Confirmed

	Management Policy.										
3	With regard to National Planning Policy Framework, adopt Norfolk Technical Guidance on Air Quality and provide pre-application advice on planning applications	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	District Council (LPA & Env Protection Team)	2018	2020	Production of documents	1µg/m3	Ongoing	2020	Not Confirmed
4	Include air quality considerations with the scoping and determination of planning applications	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	District Council (LPA & Env Protection Team)	2018	2018	Production of documents	1µg/m3	Ongoing	2018	Not Confirmed
5	Include air quality as a topic in the Neighbourhood Plan and future Local Plan documents	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	District Council (LPA & Env Protection Team)	2018	2018	Production of documents	1µg/m3	Ongoing	2018	Not Confirmed

6	Review car parking policy arrangements and consider the implementation of control measures, enforcement and the likely benefits. This will need to be compatible with the proposed countywide review of Civil Parking Enforcement (CPE)	Traffic Management	Other	County Council District Council Town Council	2018	2020	Production of documents	1µg/m3	Ongoing	2020	Not Confirmed
7	Further investigate an improvement at the Station Street/Mangate Street junction to reduce queuing and delays particularly on Station Street and, if appropriate	Transport Planning and Infrastructure	Strategic highway improvements, Re-prioritising road space away from cars, inc Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	County Council District Council Town Council	2018	2020	Production of documents	1µg/m3	Ongoing	2020	Not Confirmed

	, devise a scheme for implement ation. This may result in removing the traffic lights.										
8	Review town centre one-way system to create a better circulation of traffic around the town and, if appropriate , devise a revised layout	Transport Planning and Infrastruc ture	Other	County Council District Council Town Council	2018	2020	Production of documents	1µg/m3	Ongoing	2020	Not Confirmed
9	Review town centre car parking arrangeme nts to minimise vehicular traffic in sensitive areas and, if appropriate , devise a revised strategy	Traffic Manage ment	Workplace Parking Levy, Parking Enforcement on highway	County Council District Council Town Council	2018	2019	Production of documents	1µg/m3	Ongoing	2019	Not Confirmed

10	Consider options for new car parks on the edge of the town to keep vehicles from entering the town centre	Traffic Management	Workplace Parking Levy, Parking Enforcement on highway	County Council District Council Town Council	2018	2019	Production of documents	1µg/m3	Ongoing	2019	Not Confirmed
11	Review illegal and habitual bad parking on Station Street that hinders traffic flow and devise restrictions to prevent it happening	Traffic Management	Workplace Parking Levy, Parking Enforcement on highway	County Council District Council Town Council	2018	2019	Production of documents	1µg/m3	Ongoing	2019	Not Confirmed
12	Investigate the possibility of an HGV ban on the A1065 through the town centre and, if appropriate, devise a scheme for implementation	Traffic Management	Workplace Parking Levy, Parking Enforcement on highway	County Council District Council Town Council	2018	2020	Production of documents	1µg/m3	Ongoing	2020	Not Confirmed

13	Undertake preliminary investigations into an A1065 bypass linking to the A47 with a view to establishing it in the Neighbourhood/Local Plan	Traffic Management	Strategic highway improvements, Re-prioritising road space away from cars, inc Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	County Council District Council Town Council	2018	2018	Production of documents	1µg/m3	Ongoing	2018	Not Confirmed
14	Encourage greater use of public transport for journeys into the town centre	Transport Planning and Infrastructure	Public transport improvements-interchanges stations and services	County Council District Council Town Council	2018	2019	Production of documents	1µg/m3	Ongoing	2019	Not Confirmed
15	Improve walking and cycling facilities in and around the town	Promoting Travel Alternatives	Bus route improvements	County Council District Council Town Council	2018	2019	Production of documents	1µg/m3	Ongoing	2019	Not Confirmed
16	Review existing travel arrangements to schools and any existing Travel Plans including the role of car sharing	Promoting Travel Alternatives	Cycle network	County Council District Council Town Council	2018	2018	Production of documents	1µg/m3	Ongoing	2018	Not Confirmed

17	Investigate the possibility of car clubs to encourage lower car ownership and lower car use when non car alternatives are not suitable	Traffic Management	Public cycle hire scheme	County Council District Council Town Council	2018	2019	Production of documents	1µg/m3	Ongoing	2019	Not Confirmed
18	Investigate the provision of electric vehicle (EV) charging points to encourage greater use of EV	Promoting Low Emission Transport	Bus route improvements	County Council District Council Town Council	2018	2018	Production of documents	1µg/m3	Ongoing	2018	Not Confirmed
19	Investigate measures to encourage/ enforce bus operators to use vehicles with the best emissions standards	Promoting Low Emission Transport	Cycle network	County Council	2018	2019	Production of documents	1µg/m3	Ongoing	2019	Not Confirmed

20	Encourage greater use of public transport for journeys into the town centre	Promoting Travel Alternatives	Public cycle hire scheme	County Council District Council Town Council	2018	2018	Production of documents	1µg/m3	Ongoing	2018	Not Confirmed
21	Promotion of road safety/Eco driving awareness, anti-idling at junctions. Education of AQ issues at Schools	Public Information	Other	Public Health District Council	2018/19	2019	Production of documents and events	1µg/m3	Ongoing	2019	Not Confirmed
22	Investigate Green Space Initiatives	Other	Other	District Council Town Council	2018/19	2019	Designation of spaces	1µg/m3	Ongoing	2019	Not Confirmed

2.3 $PM_{2.5}$ – Local Authority Approach to Reducing Emissions and/or Concentrations

As detailed in Policy Guidance LAQM.PG16 (Chapter 7), local authorities are expected to work towards reducing emissions and/or concentrations of $PM_{2.5}$ (particulate matter with an aerodynamic diameter of 2.5µm or less). There is clear evidence that $PM_{2.5}$ has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases.

The Public Health Outcomes Framework indicator[5] for the fraction of deaths attributable to $PM_{2.5}$ in Breckland is 5.0% during 2016, which is below the regional average of 5.4% and the national average of 5.3%, and one of the lowest across the other authorities in the East of England region.

There is currently no ongoing monitoring of $PM_{2.5}$ within the District, and no specific measures in place to address $PM_{2.5}$ concentrations, as the air quality across the District is considered good. 2017 modelled concentrations of $PM_{2.5}$ using the Defra 2015 Background Maps tool[6] identify that grid reference x604500, y285500 contains the highest $PM_{2.5}$ concentration across the district at a predicted 11.02µg/m^3. This area is located south of Attleborough centre. Traffic emissions are the main cause of particulate emissions within the District, and as such, the implementation of the transport measures given in Table 2.2 will continue to contribute to the reduction of $PM_{2.5}$ concentrations experienced across the District.

[5] https://fingertips.phe.org.uk/profile/public-health-outcomes-framework/data#page/3/gid/1000043/pat/6/par/E12000006/ati/101/are/E07000143/iid/30101/age/230/sex/4
[6] https://uk-air.defra.gov.uk/data/laqm-background-home

3 Air Quality Monitoring Data and Comparison with Air Quality Objectives and National Compliance

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

This section sets out what monitoring has taken place and how it compares with objectives.

Breckland District Council undertook automatic (continuous) monitoring at 2 sites during 2017. **Error! Reference source not found.** in Appendix A shows the details of the sites.

Maps showing the location of the monitoring sites are provided in Appendix D. Further details on how the monitors are calibrated and how the data has been adjusted are included in Appendix C.

3.1.2 Non-Automatic Monitoring Sites

Breckland District Council undertook non- automatic (passive) monitoring of NO_2 at 26 sites during 2017. **Error! Reference source not found.** in Appendix A shows the details of the sites.

Maps showing the location of the monitoring sites are provided in Appendix D. Further details on Quality Assurance/Quality Control (QA/QC) for the diffusion tubes, including bias adjustments and any other adjustments applied (e.g. “annualisation”), are included in Appendix C. No distance correction was carried out as all tubes were reported as at relevant exposure.

3.2 Individual Pollutants

The air quality monitoring results presented in this section are, where relevant, adjusted for bias and “annualisation.” Distance correction is not required as all monitoring locations are reported as being at relevant exposure. Further details on adjustments are provided in Appendix C.

3.2.1 Nitrogen Dioxide (NO_2)

Error! Reference source not found. in Appendix A compares the ratified and adjusted monitored NO_2 annual mean concentrations for the past 5 years with the air quality objective of 40µg/m^3.

For diffusion tubes, the full 2017 dataset of monthly mean values is provided in Appendix B.

Error! Reference source not found. in Appendix A compares the ratified continuous monitored NO_2 hourly mean concentrations for the past 5 years with the air quality objective of 200µg/m^3, not to be exceeded more than 18 times per year.

Following the application of bias adjustment and annualisation to the raw data, no sites were reported to exceed the NO_2 annual mean objective in 2017. This is a decrease of one site when compared to 2016, where the monitoring location S8 was reported at 41µg/m^3, prompting the declaration of the 2017 AQMA. By comparison, S8 reported a significantly lower annual mean of 34.7 µg/m^3 in 2017.

Annualisation was completed for diffusion tube location S12 as data capture was reported at 58% in 2017. The minimum required data capture for an annual mean is 75% across the year. Table 3 illustrates the annualisation calculation result for S12, which is further applied against the bias adjusted result within Appendix B: Full Monthly Diffusion Tube Results for 2017

Table 3 – S12 Annualisation, 2017

Site 1 S12				
Site	**Site Type**	**Annual Mean (µg/m^3)**	**Period Mean (µg/m^3)**	**Ratio Annual Mean / Period Mean**
Continuous Site 1 Breckland East Wretham	Urban Background	12.09	12.58	0.961
Continuous Site 2 Breckland Swaffham	Roadside	25.91	27.15	0.954
Continuous Site 3 Wicken Fen AURN	Rural Background	8.86	9.40	0.942
Average Ratio				**0.953**

3.2.2 Particulate Matter (PM_{10})

Error! Reference source not found. in Appendix A compares the ratified and adjusted monitored PM_{10} annual mean concentrations for the past 5 years with the air quality objective of 40µg/m^3.

Error! Reference source not found. in Appendix A compares the ratified continuous monitored PM_{10} daily mean concentrations for the past 5 years with the air quality objective of 50µg/m^3, not to be exceeded more than 35 times per year.

The monitoring site S20 is significantly below both PM_{10} objectives for annual mean and daily mean concentrations and has been as such for the last 5 years.

Appendix A: Monitoring Results

Table A1 – Details of Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Monitoring Technique	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Inlet Height (m)
20	East Wretham	Urban background	591315	288704	NO_2; PM_{10}	Y	Chemiluminescent	0	10	2.5
S3	Swaffham	Roadside	582093	308469	NO_2	N	Chemiluminescent	0	2	1.5

Notes:

(1) 0m if the monitoring site is at a location of exposure (e.g. installed on the façade of a residential property).

(2) N/A if not applicable.

Table A2 – Details of Non-Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube collocated with a Continuous Analyser?	Height (m)
A1	High Street Attleborough	Urban Centre	604550	295125	NO_2	N	0	6	N	2
A2	Croft Green Attleborough	Urban Background	603843	294085	NO_2	N	0	7	N	2
D1	High Street Dereham	Urban Centre	598920	313267	NO_2	N	0	2	N	2
D2	Station Road Dereham	Urban Background	599283	313599	NO_2	N	0	8	N	2
D3	Wellington Street Dereham	Urban Centre	599319	313197	NO_2	N	0	5	N	2
S1	Impsons Butchers Swaffham	Urban Centre	581986	309031	NO_2	N	0	5	N	2.5
S2	Ceres Books Swaffham	Urban Centre	582008	308764	NO_2	N	0	3	N	2
S3	London Street	Roadside	582182	308434	NO_2	N	0	4	Y	2
S3a	London Street	Roadside	582182	308434	NO_2	N	0	4	Y	2
S3b	London Street	Roadside	582182	308434	NO_2	N	0	4	Y	2
S4	Bridewell Place Swaffham	Roadside	582058	308625	NO_2	N	0	4	N	2
S5	London Street Zebra Crossing	Roadside	582075	308496	NO_2	N	0	7	N	2
S6	London Street N	Roadside	582048	308609	NO_2	N	0	5	N	2

	Roundabout									
S7	Station Road Swaffham	Roadside	581999	309099	NO_2	Y	0	7	N	2
S8	Station Road Swaffham	Roadside	581979	309162	NO_2	Y	0	5	N	2
S9	Anglia Computer Solutions Swaffham	Roadside	581959	309057	NO_2	Y	0	4	N	2
S10	Kev's Tackle Swaffham	Roadside	5820670	309058	NO_2	N	0	3	N	2
S11	13 Station Road Swaffham	Roadside	581990	309145	NO_2	Y	0	3	N	2
S12	Glazedale Lamp post Swaffham	Roadside	581986	309213	NO_2	Y	0	3	N	2
S13	33 Station Road Swaffham	Roadside	581978	309312	NO_2	N	0	3	N	1
S14	Corner Whitecross	Roadside	582082	309856	NO_2	N	0	3	N	2
T1	London Street Fire Station	Roadside	587126	283336	NO_2	N	0	3	N	2
T2	55 Bury Road Thetford	Roadside	586846	282721	NO_2	N	0	3	N	2
T3	41 E. Cavell Close Thetford	Suburban	587036	284579	NO_2	N	0	101	N	2
W1	High Street Corals Watton	Urban Centre	591747	300796	NO_2	N	0	2.5	N	2
W2	Charles Avenue Watton	Urban Background	591885	300622	NO_2	N	0	2	N	2

20	Wretham SSSI	Rural	591315	288704	NO_2	N	0	55	Y	3
20a	Wretham SSSI	Rural	591315	288704	NO_2	N	0	55	Y	3
20b	Wretham SSSI	Rural	591315	288704	NO_2	N	0	55	Y	3
30	East Harling	Rural	599403	286353	NO_2	N	0	2.5	N	2

Notes:

(1) 0m if the monitoring site is at a location of exposure (e.g. installed on/adjacent to the façade of a residential property).

(2) N/A if not applicable.

Table A 3 - Annual Mean NO_2 Monitoring Results

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2017 (%) (2)	NO_2 Annual Mean Concentration (µg/m^3) (3)				
					2013	2014	2015	2016	2017
20	Urban Background	Automatic	100	100	17.0	22.0	27.0	25.0	12.1
S3	Roadside	Automatic	100	100	33.0	33.0	29.0	28.0	24.9
A1	Urban Centre	Diffusion Tube	100	100	31.2	27.2	27.0	28.6	23.6
A2	Urban Background	Diffusion Tube	100	100	11.9	10.9	10.9	11.5	10.2
D1	Urban Centre	Diffusion Tube	100	100	36.8	35.4	33.9	34.3	30.9
D2	Urban Centre	Diffusion Tube	100	100	20.2	28.6	27.8	28.6	25.0
D3	Urban Centre	Diffusion Tube	91.7	91.7	26.2	14.7		11.2	13.7
S1	Urban Centre	Diffusion Tube	100	100	25.9	25.3	22.6	24.2	20.2
S2	Urban Centre	Diffusion Tube	100	100	19.7	38.5	37.3	38.4	33.5
S3	Roadside	Diffusion Tube	100	100	33.2	33.7	28.9	31.4	25.2
S3a	Roadside	Diffusion Tube	100	100	34.3	32.6	29.5	30.0	26.1
S3b	Roadside	Diffusion Tube	100	100	32.6	32.7	29.0	30.2	26.0
S4	Roadside	Diffusion Tube	100	100	30.1	28.7	25.2	26.9	20.9
S5	Roadside	Diffusion Tube	100	100	30.7	28.6	25.9	25.7	22.7
S6	Roadside	Diffusion Tube	100	100	35.1	34.3	31.1	33.2	29.1
S7	Roadside	Diffusion Tube	100	100	36.4	34.9	34.8	38.4	29.7
S8	Roadside	Diffusion Tube	100	100	41.6	40.4	37.7	41.0	34.3
S9	Roadside	Diffusion Tube	100	100	30.7	28.2	26.4	26.7	21.9
S10	Roadside	Diffusion Tube	100	100	28.0	25.9	24.7	24.9	22.7
S11	Roadside	Diffusion Tube	83.3	83.3	36.7	35.6	34.0	37.0	30.6
S12	Roadside	Diffusion Tube	58.3	58.3	35.7	34.4	31.4	32.0	29.2

S13	Roadside	Diffusion Tube	100	100	26.8	25.7	25.0	26.4	21.7
S14	Roadside	Diffusion Tube	91.7	91.7	31.6	27.5	22.9	24.2	21.2
T1	Roadside	Diffusion Tube	75	75	28.7	28.5	26.9	27.2	25.8
T2	Roadside	Diffusion Tube	75	75	28.3	28.7	25.2	25.7	22.0
T3	Suburban	Diffusion Tube	75	75	15.7	15.1	13.7	14.9	14.1
W1	Urban Centre	Diffusion Tube	91.7	91.7	24.8	23.9	23.4	26.7	24.1
W2	Urban Background	Diffusion Tube	100	100	14.2	13.2	12.2	13.1	12.4
20	Rural	Diffusion Tube	100	100	16.9	11.2	10.2	11.1	10.4
20a	Rural	Diffusion Tube	100	100	16.9	11.3	10.1	11.2	11.3
20b	Rural	Diffusion Tube	100	100	16.3	11.4	9.9	11.0	10.7
30	Rural	Diffusion Tube	83.3	83.3	28.2	25.9	17.5	15.8	13.7

☒ **Diffusion tube data has been local bias corrected**

☒ **Annualisation has been conducted where data capture is <75%**

Results not available

Notes: Exceedances of the NO_2 annual mean objective of 40µg/m^3 are shown in **bold**.

NO_2 annual means exceeding 60µg/m^3, indicating a potential exceedance of the NO_2 1-hour mean objective are shown in **bold and underlined.**

(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

(3) Means for diffusion tubes have been corrected for bias. All means have been “annualised” as per Boxes 7.9 and 7.10 in LAQM.TG16 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

Figure A 1 - Trends in Annual Mean Diffusion Tube NO_2 Concentrations – Within Declared AQMA

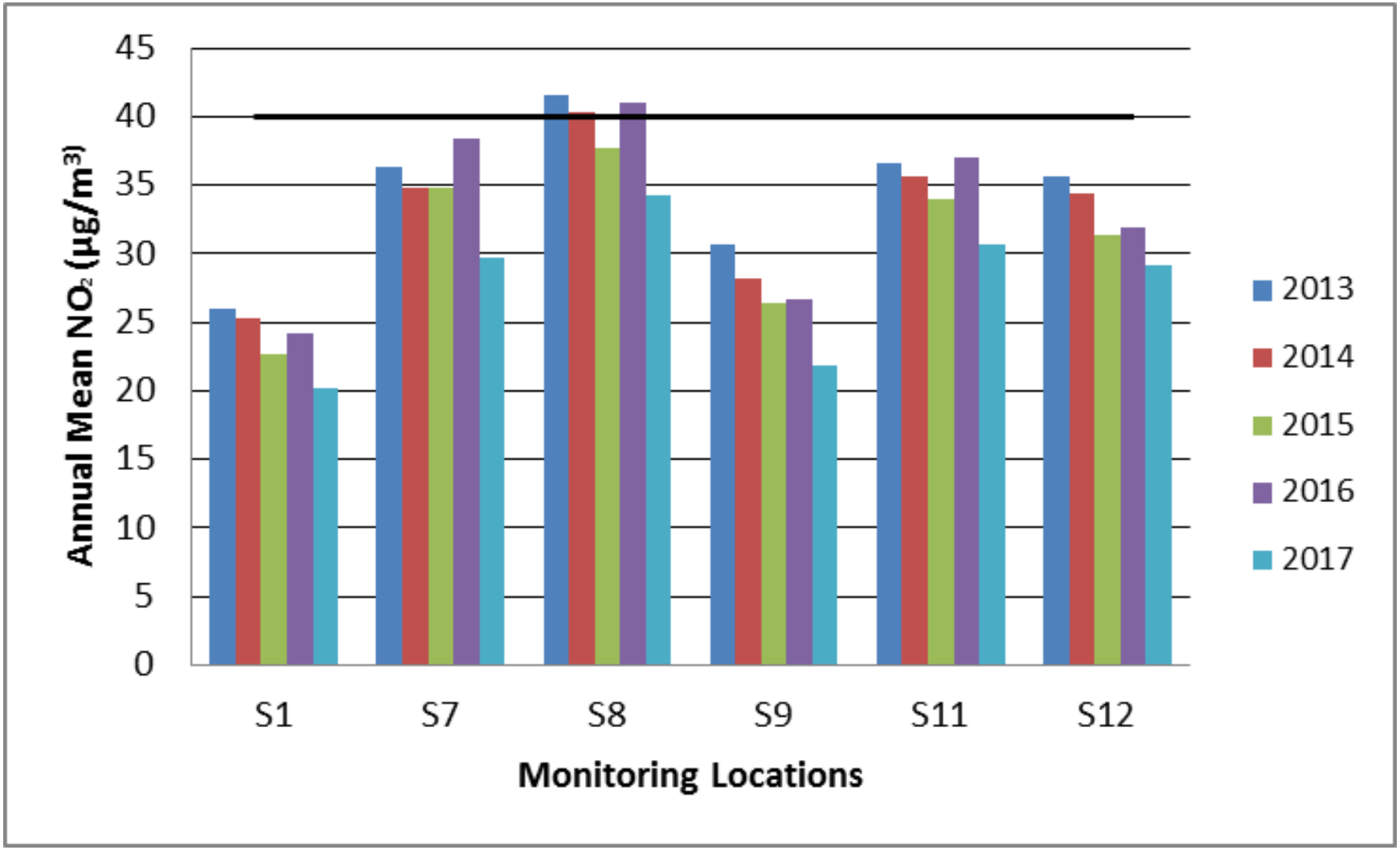


Figure A 2 - Trends in Annual Mean Diffusion Tube NO2 Concentrations – Outside Declared AQMA

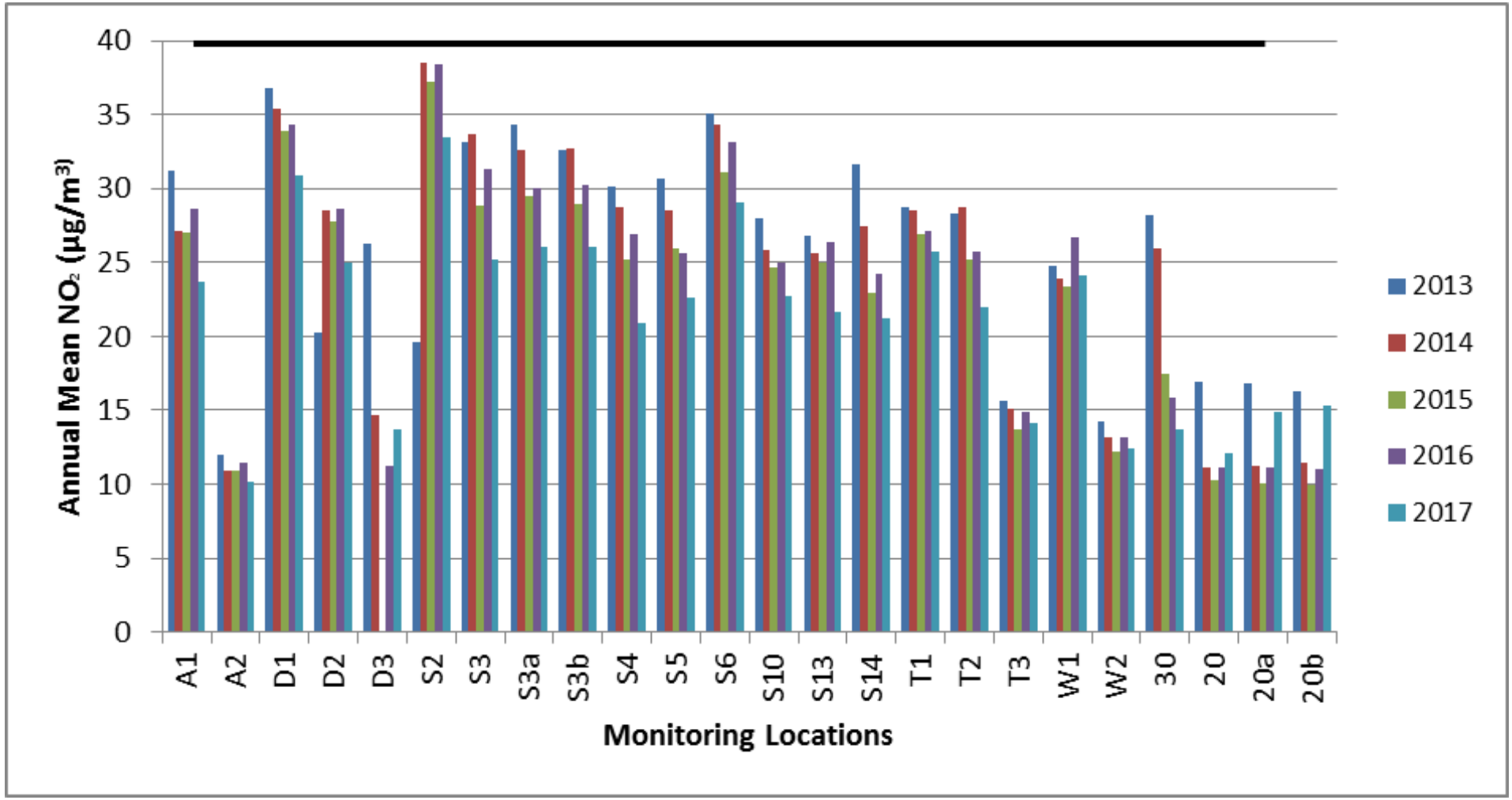


Table A 4 - 1-Hour Mean NO_2 Monitoring Results

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2017 (%) (2)	NO_2 1-Hour Means > 200µg/m^3 (3)				
					2013	2014	2015	2016	2017
20	East Wretham	Urban background	93	93	0	0	0	0	0
S3	Swaffham	Roadside	93	93	1	1	0	0	0

Notes:

Exceedances of the NO_2 1-hour mean objective (200µg/m^3 not to be exceeded more than 18 times/year) are shown in **bold.**

(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

(3) If the period of valid data is less than 85%, the 99.8th percentile of 1-hour means is provided in brackets.

Table A 5 - Annual Mean PM_{10} Monitoring Results

Site ID	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2017 (%) (2)	PM_{10} Annual Mean Concentration ($\mu g/m^3$) (3)				
				2013	2014	2015	2016	2017
20	East Wretham	100	100	19	18	16	15	16

Notes:

Exceedances of the PM_{10} annual mean objective of 40$\mu g/m^3$ are shown in **bold.**

(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

(3) All means have been "annualised" as per Boxes 7.9 and 7.10 in LAQM.TG16, valid data capture for the full calendar year is less than 75%. See Appendix C for details.

Table A 6 - 24-Hour Mean PM_{10} Monitoring Results

Site ID	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2017 (%) (2)	PM_{10} 24-Hour Means > 50µg/m^3 (3)				
				2013	2014	2015	2016	2017
20	East Wretham	93	93	9	7	2	1	4

Notes:

Exceedances of the PM_{10} 24-hour mean objective (50µg/m^3 not to be exceeded more than 35 times/year) are shown in **bold.**

(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

(3) If the period of valid data is less than 85%, the 90.4th percentile of 24-hour means is provided in brackets.

Appendix B: Full Monthly Diffusion Tube Results for 2017

Table B 1 - NO_2 Monthly Diffusion Tube Results - 2017

Site ID	NO_2 Mean Concentrations ($\mu g/m^3$)														
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean		
													Raw Data	Bias Adjusted (0.86) and Annualised (1)	Distance Corrected to Nearest Exposure (2)
A1	36.4	35.6	30.0	29.7	24.2	23.9	19.0	25.1	25.2	27.0	30.8	23.1	27.5	23.6	
A2	19.8	15.3	13.1	9.7	8.0	7.6	7.3	8.7	10.9	12.2	16.5	12.9	11.8	10.2	
D1	41.6	39.0	35.2	36.3	31.4	32.4	32.5	40.2	28.4	38.1	37.4	39.1	36.0	30.9	
D2	36.3	29.4	32.0	27.5	21.9	29.7	25.2	30.3	24.1	32.3	31.9	27.7	29.0	25.0	
D3	13.7	9.4	8.2		6.9	8.0	12.4	21.6	18.9	23.6	28.3	24.4	15.9	13.7	
S1	34.1	32.8	25.1	21.1	22.4	20.4	18.3	20.5	22.6	20.3	25.3	18.6	23.5	20.2	
S2	50.3	48.0	42.1	40.4	30.0	33.0	33.8	36.6	35.5	37.3	45.5	34.3	38.9	33.5	
S3	43.9	34.1	27.9	24.2	28.8	23.7	27.7	27.8	30.9	27.4	32.1	23.1	29.3	25.2	
S3a	44.6	36.4	28.9	27.9	29.4	27.9	27.5	28.8	32.2	27.5	31.0	21.8	30.3	26.1	
S3b	41.7	36.2	28.8	28.3	29.8	28.3	26.0	28.9	30.4	28.9	30.8	25.4	30.3	26.0	
S4	28.7	33.1	23.6	27.4	25.9	23.6	22.0	13.2	25.4	22.1	27.7	19.4	24.3	20.9	
S5	33.6	29.9	25.1	29.3	23.2	21.7	24.6	16.1	26.2	23.8	35.2	27.5	26.3	22.7	
S6	44.8	38.3	34.3	34.4	27.8	30.6	32.3	33.1	33.3	32.9	37.0	27.5	33.9	29.1	
S7	44.0	41.4	39.6	31.1	33.2	32.5	30.4	31.3	32.7	30.0	35.5	32.9	34.5	29.7	
S8	51.9	47.8	40.7	38.6	30.9	36.9	38.0	39.2	39.4	41.0	34.5	39.5	39.9	34.3	

S9	35.7	28.5	25.2	26.9	21.7	22.5	22.9	21.8	25.1	22.1	29.5	23.6	25.5	21.9	
S10	31.6	28.6	24.4	27.7	22.9	27.8	21.9	24.2	23.2	23.3	32.6	28.6	26.4	22.7	
S11	45.1	47.8	35.0	36.1	32.6	37.0	31.2			31.7	32.9	27.0	35.6	30.6	
S12	40.2			38.3	35.8	24.3			38.3	34.9	37.5		35.6	29.2	
S13	36.0	30.8	25.2	25.0	24.2	24.1	20.3	23.9	25.1	22.2	25.0	20.9	25.2	21.7	
S14	34.8	27.6	25.1	24.3	21.8		20.5	22.0	23.5	21.3	27.7	22.1	24.6	21.2	
T1	40.8	31.6	31.1	31.4	24.0	32.3	24.0	28.8	25.8				30.0	25.8	
T2	32.2	29.9	26.6	24.3	24.1	26.2	19.2	25.7	21.9				25.6	22.0	
T3	26.8	18.6	17.5	15.4	10.2	17.3	10.2	11.7	13.3	15.4	21.9	18.5	16.4	14.1	
W1	33.0	31.8	25.9	29.8	26.0	30.4	22.5	24.9	25.1	28.2		31.4	28.1	24.1	
W2	23.8	16.7	14.3	11.9	10.4	16.1	8.6	8.9	11.2	14.2	19.2	18.4	14.5	12.4	
20	20.4	14.7	13.1	9.5	8.2	15.0	8.2	9.0	8.7	11.4	14.8	12.1	12.1	10.4	
20a	22.0	15.3	13.3	8.9	8.8	15.6	8.0	9.5	9.6	11.9	20.4	14.9	13.2	11.3	
20b	20.0	14.7	12.8	9.0	9.0	15.3	8.3	8.6	9.2	11.7	15.0	15.4	12.4	10.7	
30	26.9	17.7	17.5	14.2	13.4	20.0			10.4	10.6	15.1	13.1	15.9	13.7	

☒ **Local bias adjustment factor used**

☒ **Annualisation has been conducted where data capture is <75%**

Tube Missing

Notes:

Exceedances of the NO_2 annual mean objective of 40µg/m^3 are shown in **bold**.

NO_2 annual means exceeding 60µg/m^3, indicating a potential exceedance of the NO_2 1-hour mean objective are shown in **bold and underlined.**

(1) See Appendix C for details on bias adjustment and annualisation.

(2) Distance corrected to nearest relevant public exposure.

Appendix C: Supporting Technical Information / Air Quality Monitoring Data QA/QC

Diffusion Tube Bias Adjustment Factors

The diffusion tube data has been corrected using a bias adjustment factor, which is an estimate of the difference between the diffusion tube concentration and continuous monitoring, the latter assumed to be a more accurate method of monitoring. The Defra LAQM.TG(16) provides guidance with regard to the application of a bias adjustment factor to correct diffusion tube monitoring. Triplicate co-location studies can be used to determine a local bias factor based on the comparison of diffusion tube results with data taken from NO_x/NO_2 continuous analysers. Alternatively, the national database of diffusion tube co-location surveys provides bias factors for the relevant laboratory and preparation method.

With regard to the application of a bias adjustment factor for diffusion tubes, Defra LAQM.TG(16) and the LAQM Helpdesk[7] recommend the use of a local bias adjustment factor where available and relevant to diffusion tube sites. The Council expressed concerns in last year's report that the continuous monitoring site S3 in Swaffham, which has been previously used for the local bias calculation, has experienced condensation in the line, producing unusually low bias factor results. This was resolved in 2017 and the triplicate site's data calculated a factor for 2017 of 0.86, which is close to the national bias for 2017 (0.87)[8]. Table 4 illustrates the local bias adjustment data.

[7] Laqm.defra.gov.uk
[8] National Diffusion Tube Bias Adjustment Factor Spreadsheet version 03/18 available at https://laqm.defra.gov.uk/bias-adjustment-factors/national-bias.html

Table 4 - Local Bias Adjustment Factor 2017, S3 Triplicate Location

Diffusion Tubes Measurements										Automatic Method		Data Quality Check	
Period	Start Date dd/mm/yyyy	End Date dd/mm/yyyy	Tube 1 µgm^{-3}	Tube 2 µgm^{-3}	Tube 3 µgm^{-3}	Triplicate Mean	Standard Deviation	Coefficient of Variation (CV)	95% CI of mean	Period Mean	Data Capture (% DC)	Tubes Precision Check	Automatic Monitor Data
1	04/01/2017	31/01/2017	43.9	44.6	41.7	43	1.5	4	3.8	44.6	100	Good	Good
2	31/01/2017	28/02/2017	34.1	36.4	36.2	36	1.2	3	3.1	32.1	100	Good	Good
3	28/02/2017	28/03/2017	27.9	28.9	28.8	29	0.5	2	1.3	27.7	100	Good	Good
4	28/03/2017	27/04/2017	24.2	27.9	28.3	27	2.2	8	5.6	26.3	100	Good	Good
5	27/04/2017	27/05/2017	28.8	29.4	29.8	29	0.5	2	1.3	28.9	97.3	Good	Good
6	30/05/2017	28/06/2017	23.7	27.9	28.3	27	2.6	10	6.4	21.5	100	Good	Good
7	28/06/2017	01/08/2017	27.7	27.5	26.0	27	0.9	3	2.3	19.6	99.8	Good	Good
8	01/08/2017	30/08/2017	27.8	28.8	28.9	28	0.6	2	1.5	17.7	100	Good	Good
9	30/08/2017	28/09/2017	30.9	32.2	30.4	31	0.9	3	2.3	25.3	100	Good	Good
10	28/09/2017	02/11/2017	27.4	27.5	28.9	28	0.8	3	2.1	19.7	99.6	Good	Good
11	02/11/2017	06/12/2017	32.1	31.0	30.8	31	0.7	2	1.8	24.4	99.8	Good	Good
12	06/12/2017	03/01/2018	23.1	21.8	25.4	23	1.8	8	4.6	14.3	13.5	Good	Poor Data Capture
13													
	It is necessary to have results for at least two tubes in order to calculate the precision of the measurements									Overall survey -->		Good precision	Good Overall

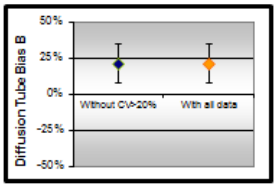
Site Name/ ID:

Precision 12 out of 12 periods have a CV smaller than 20%

(Check average CV & DC from Accuracy calculations)

Accuracy (with 95% confidence interval) without periods with CV larger than 20%	
Bias calculated using 11 periods of data	
Bias factor A	0.86 (0.77 - 0.97)
Bias B	17% (3% - 30%)
Diffusion Tubes Mean:	31 µgm^{-3}
Mean CV (Precision):	4
Automatic Mean:	26 µgm^{-3}
Data Capture for periods used:	100%
Adjusted Tubes Mean:	26 (24 - 30) µgm^{-3}

Accuracy (with 95% confidence interval) WITH ALL DATA	
Bias calculated using 11 periods of data	
Bias factor A	0.86 (0.77 - 0.97)
Bias B	17% (3% - 30%)
Diffusion Tubes Mean:	31 µgm^{-3}
Mean CV (Precision):	4
Automatic Mean:	26 µgm^{-3}
Data Capture for periods used:	100%
Adjusted Tubes Mean:	26 (24 - 30) µgm^{-3}



Jaume Targa, for AEA
Version 04 - February 2011

The local bias adjustment factor has been used in this year's ASR to ensure best practice in line with LAQM.TG(16) whilst maintaining consistency with previous years' results.

The diffusion tube data for Breckland District Council is supplied and analysed by Gradko International Ltd. The tubes were prepared using the 50% TEA in acetone preparation method. As stated, the national bias adjustment factor for Gradko 20% TEA in water is 0.87 for the year 2017 (based on 39 studies, version 07/18) as derived from the national bias adjustment factor spreadsheet.

For previous years data (2013 to 2016) the bias adjustment factors have been taken from previous LAQM reports completed by Breckland District Council, with 2016 based on the national bias figure and previous years' taking adjustment data from the local bias. There is a 0.01 difference between 2017 local and national bias adjustment calculations.

QA/QC of Diffusion Tube Monitoring

The diffusion tubes for the year 2017 were supplied and analysed by Gradko International Ltd, the tubes were prepared using the 20% TEA in water method. All results have been bias adjusted and annualised where required before being presented in Appendix B: Full Monthly Diffusion Tube Results for 2017

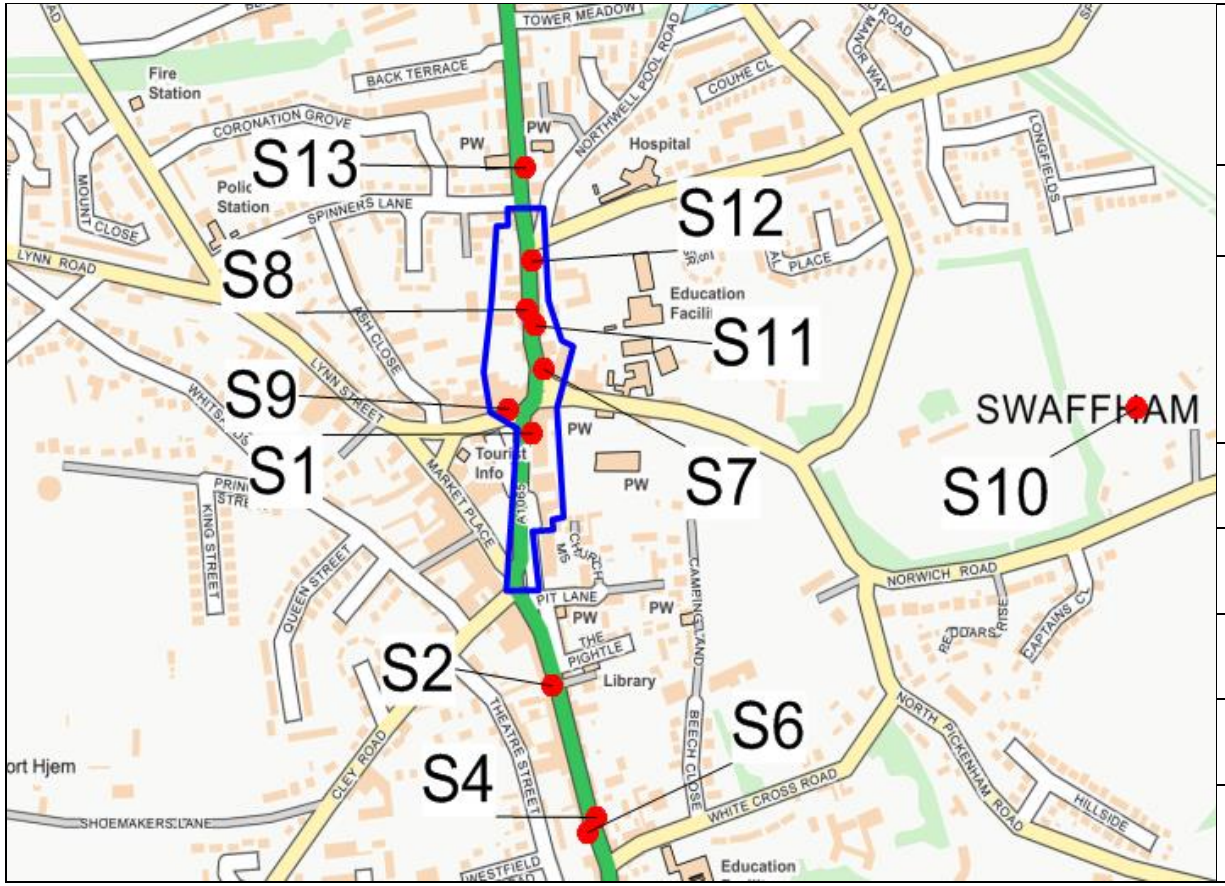
Gradko is a UKAS accredited laboratory and participates in the new AIR-PT Scheme (a continuation of the Workplace Analysis Scheme for Proficiency (WASP)) for NO_2 tube analysis and the Annual Field Inter-Comparison Exercise. These provide strict performance criteria for participating laboratories to meet, thereby ensuring NO_2 concentrations reported are of a high caliber. The lab follows the procedures set out in the Harmonisation Practical Guidance In the latest available AIR-PT results, AIR-PT AR 0018 (January to February 2017), AIR-PT AR019 (April to May 2017), AIR-PT AR021 (July to August 2017) and AIR-PT AR022 (September to October 2017).. Gradko has scored 100% on all results. The percentage score reflects the results deemed to be satisfactory based upon the z-score of < ± 2. Twenty out of the twenty-two local Authority co-location studies in 2017 were rated as 'good' (tubes are considered to have "good" precision where the coefficient of variation of duplicate or triplicate diffusion tubes for eight or more periods during the year is less than 20%).

Short-term to Long-term Data Adjustment

For the 2017 diffusion tubes, annualisation was required at one of the monitoring sites as data capture was below 75%. Site S12 was active for only seven months in 2017 which was considered an invalid data capture and Table 3 illustrates the annualisation data used for calculation of the annual mean.

Appendix D: Maps of Monitoring Locations and AQMAs

Figure D.1 – Swaffham AQMA & Diffusion Tube Locations



Legend

Diffusion Tube Locations — **AQMA Boundary**

	Air Quality Bureau Veritas 5th Floor 66 Prescott Street London, E1 8HG
Location Swaffham AQMA & Diffusion Tube Locations	
Title AQMA & Diffusion Tube Locations	
By JD	**Approved** HS
Scale Not To Scale	**Job Ref** 6479470
Date August 2018	**Figure No.** D.1

Figure D.2 – Attleborough

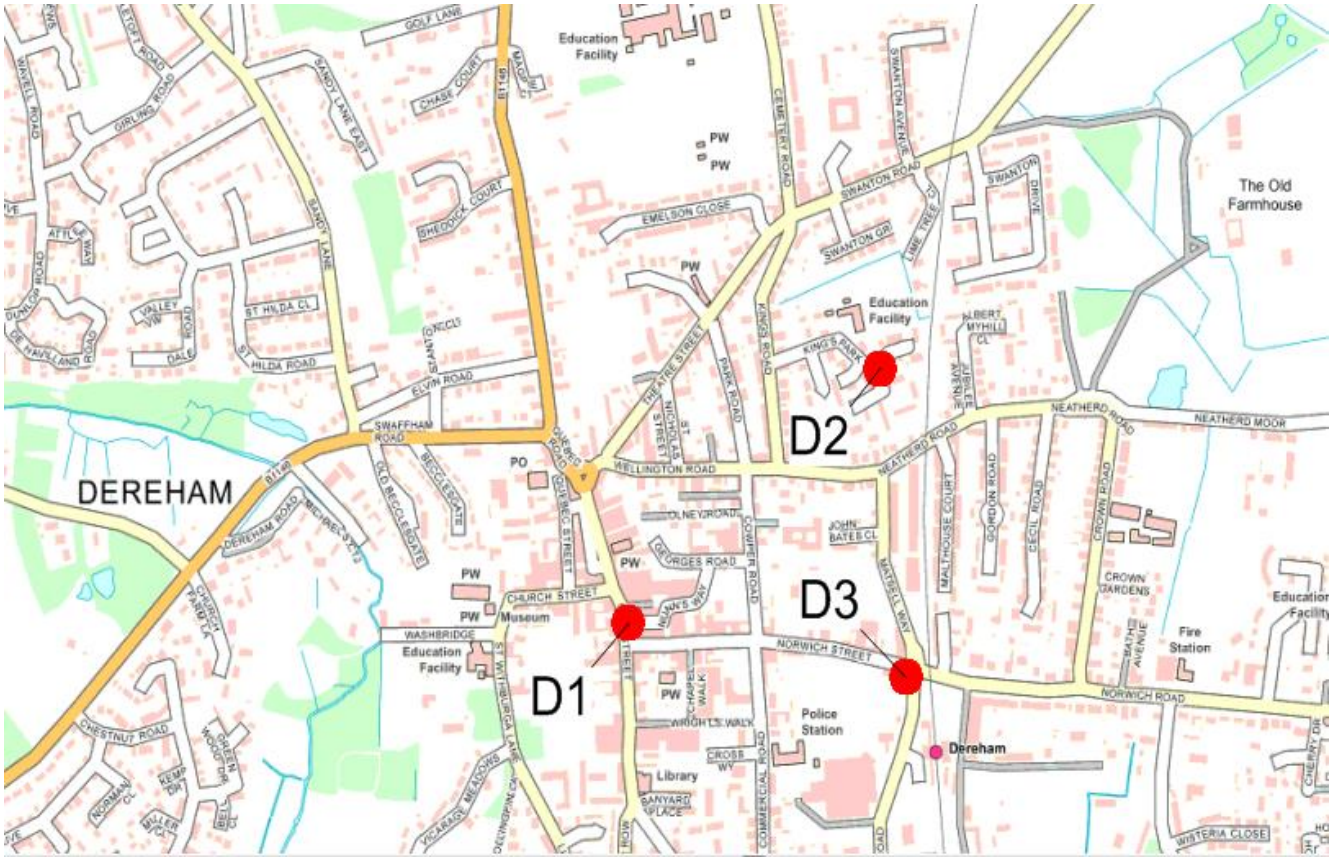
Legend

- Diffusion Tube Locations

Air Quality
Bureau Veritas
5th Floor
66 Prescott Street
London, E1 8HG

Location Attleborough	
Title Diffusion Tube Locations	
By JD	**Approved** HS
Scale Not To Scale	**Job Ref** 6479470
Date August 2018	**Figure No.** D.2

Figure D.3 – Dereham



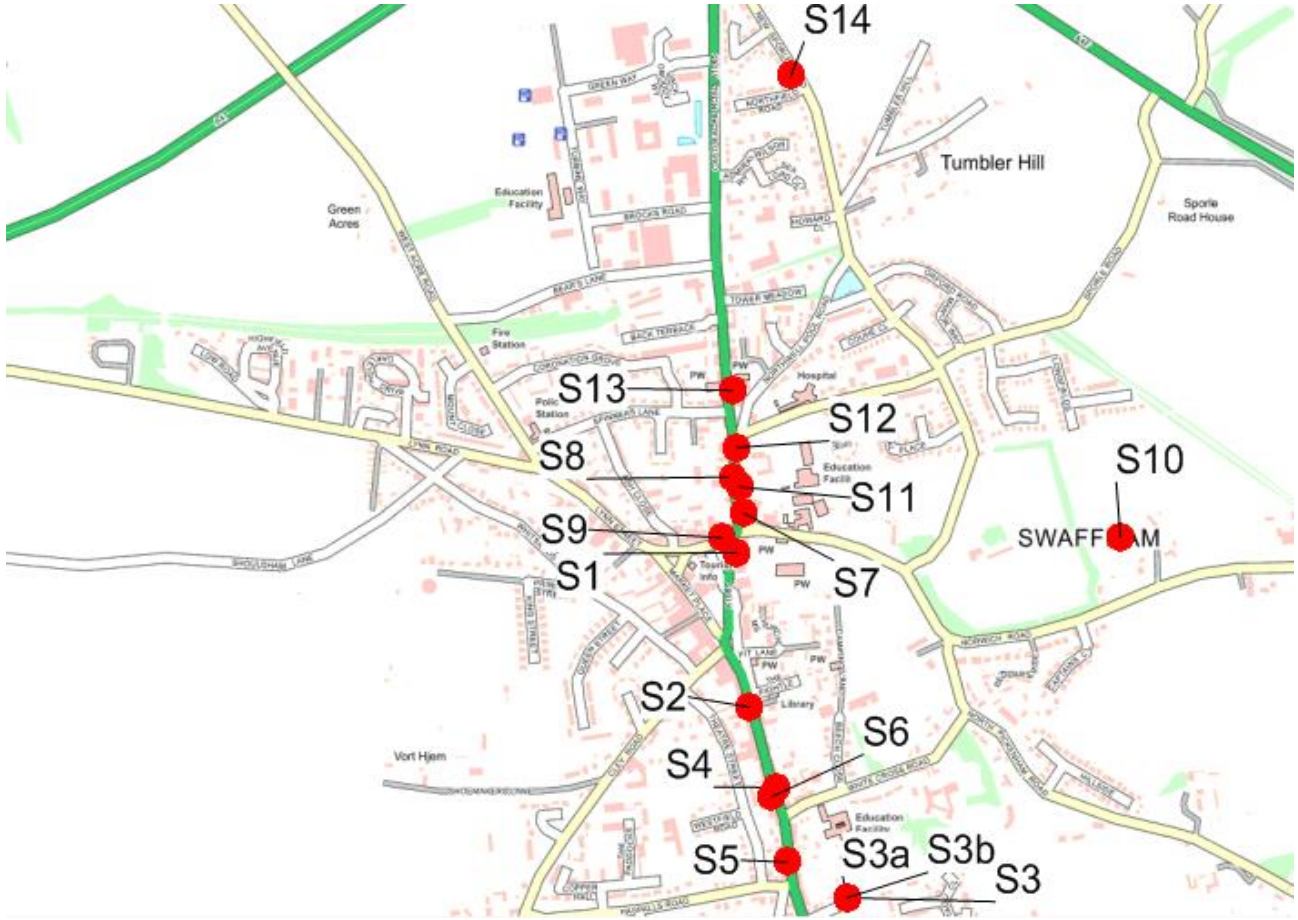
Legend

- Diffusion Tube Locations

Air Quality
Bureau Veritas
5th Floor
66 Prescott Street
London, E1 8HG

Location	
Dereham	
Title	
Diffusion Tube Locations	
By	**Approved**
JD	HS
Scale	**Job Ref**
Not To Scale	6479470
Date	**Figure No.**
August 2018	D.3

Figure D.4 – Swaffham



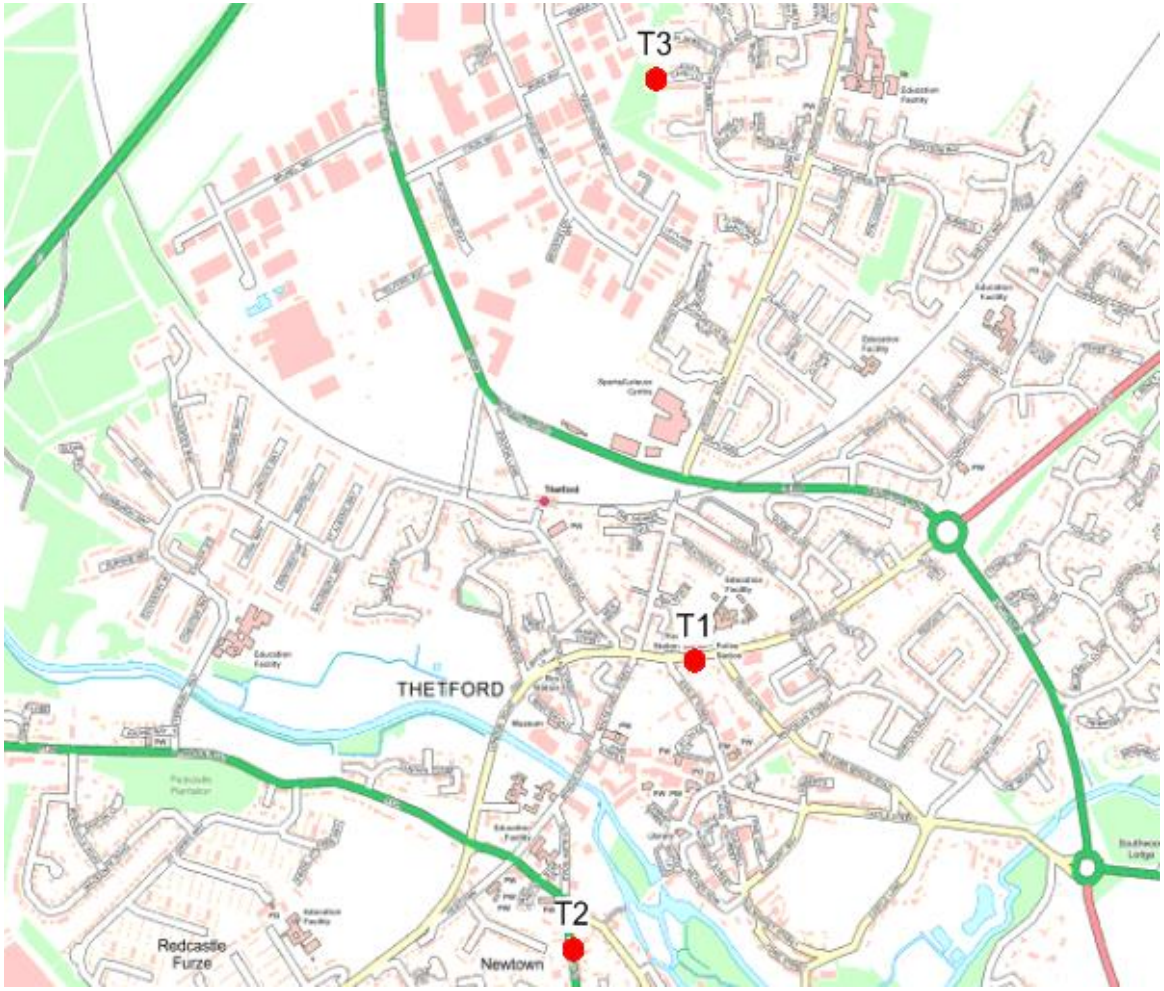
Legend

- Diffusion Tube Locations

Air Quality
Bureau Veritas
5th Floor
66 Prescott Street
London, E1 8HG

Location Swaffham	
Title Diffusion Tube Locations	
By JD	**Approved** HS
Scale Not To Scale	**Job Ref** 6479470
Date August 2018	**Figure No.** D.4

Figure D.5 – Thetford



Legend

Diffusion Tube Locations

Air Quality
Bureau Veritas
5th Floor
66 Prescott Street
London, E1 8HG

Location Thetford	
Title Diffusion Tube Locations	
By JD	**Approved** HS
Scale Not To Scale	**Job Ref** 6479470
Date August 2018	**Figure No.** D.5

Figure D.6 – Watton

Legend

- Diffusion Tube Locations

Air Quality
Bureau Veritas
5th Floor
66 Prescott Street
London, E1 8HG

Location Watton	
Title Diffusion Tube Locations	
By JD	**Approved** HS
Scale Not To Scale	**Job Ref** 6479470
Date August 2018	**Figure No.** D.6

Figure D.7 – East Harling

Legend

- Diffusion Tube Locations

Air Quality
Bureau Veritas
5th Floor
66 Prescott Street
London, E1 8HG

Location East Harling	
Title Diffusion Tube Locations	
By JD	**Approved** HS
Scale Not To Scale	**Job Ref** 6479470
Date August 2018	**Figure No.** D.7

Figure D.8 – Wretham SSSI

Legend

Diffusion Tube Locations

Air Quality
Bureau Veritas
5th Floor
66 Prescott Street
London, E1 8HG

Location	
Wretham SSSI	
Title	
Diffusion Tube Locations	
By	**Approved**
JD	HS
Scale	**Job Ref**
Not To Scale	6479470
Date	**Figure No.**
August 2018	D.8

Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England

Pollutant	Air Quality Objective[9]	
	Concentration	Measured as
Nitrogen Dioxide (NO_2)	200 µg/m^3 not to be exceeded more than 18 times a year	1-hour mean
	40 µg/m^3	Annual mean
Particulate Matter (PM_{10})	50 µg/m^3, not to be exceeded more than 35 times a year	24-hour mean
	40 µg/m^3	Annual mean
Sulphur Dioxide (SO_2)	350 µg/m^3, not to be exceeded more than 24 times a year	1-hour mean
	125 µg/m^3, not to be exceeded more than 3 times a year	24-hour mean
	266 µg/m^3, not to be exceeded more than 35 times a year	15-minute mean

[9] The units are in microgrammes of pollutant per cubic metre of air (µg/m^3).

Glossary of Terms

Abbreviation	Description
AQAP	Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the local authority intends to achieve air quality limit values'
AQMA	Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives
ASR	Air quality Annual Status Report
Defra	Department for Environment, Food and Rural Affairs
DMRB	Design Manual for Roads and Bridges – Air quality screening tool produced by Highways England
EU	European Union
FDMS	Filter Dynamics Measurement System
LAQM	Local Air Quality Management
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides
PM_{10}	Airborne particulate matter with an aerodynamic diameter of 10µm (micrometres or microns) or less
$PM_{2.5}$	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less
QA/QC	Quality Assurance and Quality Control
SO_2	Sulphur Dioxide

References

- Local Air Quality Management Technical Guidance LAQM.TG(16). February 2018. Published by Defra in partnership with the Scottish Government, Welsh Assembly Government and Department of the Environment Northern Ireland.
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- Breckland District Council Draft Air Quality Action Plan 2018.
- Breckland District Council 2014 - 2017 Annual Status Reports.
- National Diffusion Tube Bias Adjustment Factor Spreadsheet, version 07/18 published in July 2018.
- https://www.breckland.gov.uk/planningapplicationweeklylists