




2019 Air Quality Annual Status Report (ASR) for the year 2018

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

June 2019

Huntingdonshire District Council

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Executive Summary: Air Quality in Our Area

The Environment Act 1995 places a duty on Local Authorities to monitor, assess and take action to improve local air quality under the statutory process of Local Air Quality Management (LAQM). The LAQM system now places greater emphasis on action planning to improve air quality and includes local measures as part of EU reporting requirements, as well as requiring the completion of an air quality Annual Status Report (ASR). This report forms Huntingdonshire District Councils (HDC) 2019 ASR and is a review of air quality in the district for the year 2018.

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 billion³.

Locally the Cambridgeshire Transport and Health Joint Strategic Needs Assessment (JSNA) for Air Pollution further outlines the impacts of poor air quality on health and can be found at <https://cambridgeshireinsight.org.uk/wp-content/uploads/2017/08/Transport-and-Health-JSNA-2015-Air-Pollution.pdf>

This ASR relates to data gathered between 1st January and 31st December 2018.

Air Quality in Huntingdonshire

Nitrogen Dioxide (NO₂) continues to be the only pollutant that currently exceeds the objective level within the district. The primary source of NO₂ in Huntingdonshire is due to vehicle emissions, mostly originating from the A14 and to a lesser extent the A1 that runs through the district. However, local traffic within the market towns continues to cause some elevated levels.

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

Huntingdonshire currently has four Air Quality Management Areas (AQMA's).

1. Huntingdon,
2. St Neots,
3. Brampton, and
4. A14 Hemingford to Fenstanton.

These can be viewed on our website at:

<http://www.huntingdonshire.gov.uk/environmental-issues/noise-nuisance-pollution/air-quality/> and on the Defra website at: https://uk-air.defra.gov.uk/aqma/local-authorities?la_id=131

As a whole, the level of NO₂ continues to fall as it has done so over the last five years, and is mostly below the annual limit. In some areas there has been a clear reduction this year, especially at the locations associated with the A1. This is demonstrated in the graphs in Figure A.1. Huntingdon continues to experience a small hotspot, which shows readings above the annual limit and this is predominantly linked with the A14 and ring road. This is the only area to exceed the objective and when the distance calculation is applied to indicate the level at the nearest sensitive receptor the result is just below the objective at 39.4µg/m³.

Residential Development:

As a growing district Huntingdonshire has many large scale developments both under construction, as well as proposed within the planning process. Areas around St Neots (such as Loves Farm/Wintringham Park and Loves Farm East) and Alconbury Weald are undergoing large scale development; other sites include locations at Ramsey, St Ives, Godmanchester and Buckden. Most larger scale proposals are accompanied by an Air Quality Impact Assessment which assesses the impact of the proposed development; construction impacts and mitigation; and the impact of the local air quality on the development itself.

Industrial Development:

Permission has recently been given for two crematoria north of Huntingdon, both of which will require an Environmental Permit. A Small Waste Incineration Plant is due to be commissioned in 2019 near Colne. This falls under the Industrial Emissions Directive and has an Environmental Permit.

Actions to Improve Air Quality

During 2018 officers took part in various partnership working events with Public Health England and Cambridgeshire County Council Public Health Team, where Highways and Planning Officers were also invited. These were considered beneficial and it is hoped more will be planned for the future to improve partnership working.

The Environmental Health Team continue to provide advice to the Planning Team regarding proposed developments in an attempt to minimise air pollution impacts, even if there is no risk that air quality objectives will be breached. Therefore even if the effect is judged to be insignificant, consideration of the application of good design and good practice measures, including electric vehicle rapid charge points is advised.

HDC also participated in public awareness campaigns such as:

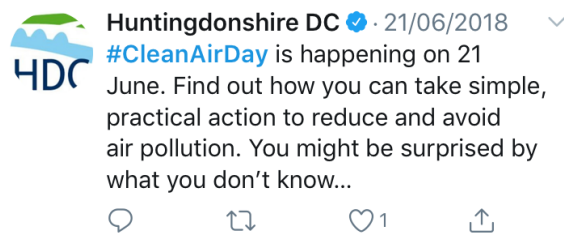
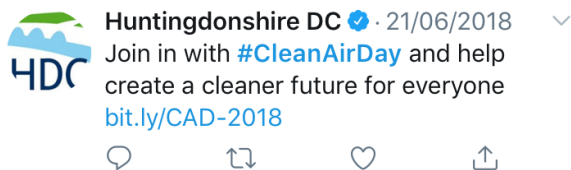
Promotion of the Defra guidance on open fires and wood burning stoves:

As well as tweeting, providing information regarding this on our website and providing links to the Defra documents, we wrote to all of our Parish and Town Councils providing them with Defra's advice and requesting it be disseminated to residents via any local newsletters/meetings etc.



National Clean Air day 2018:

We supported this event by providing information on our website's main page, and tweeting information and advice to our followers throughout the day.



The re-routing of the A14 is still progressing and remains on target for completion by the end of 2020, however the new section of road should be open earlier than this and therefore the heavy traffic will be relocated away from large residential areas before the end of 2020. As reported previously, predictions indicate that all areas currently in an AQMA will see their NO₂ and PM₁₀ levels significantly reduce once the scheme has been built. While some areas of the district will increase slightly, predictions have shown that these will all remain below EU limit values. Huntingdonshire District Council (HDC) took a leading role in securing a satisfactory result for our residents.

Due to continued consistent compliance of the diffusion tubes within the St Neots, Fenstanton and Brampton Air Quality Management Areas (AQMA's), and following the completion of a detailed modelling assessment demonstrating air quality limits are not being breached within St Neots, a report has been written reviewing the AQMA's, concluding that all 3 should be revoked, leaving Huntingdon the only AQMA remaining. The draft report is currently with management and once finalised will be

put before committee for approval. This process has been confirmed with Defra and will require HDC committee approval, prior to the Order being made. Defra has offered clear support for this proposal and stated the following in their appraisal report of the 2018 ASR:

‘AQMA statuses should be reviewed as soon as possible. To reiterate AQMAs 2, 3 and 4 have demonstrated long standing compliance and there is no need for these areas to be designated as such’.

The detailed modelling assessment of NO₂ concentrations in St Neots can be viewed on our website at: <http://www.huntingdonshire.gov.uk/media/3245/st-neots-air-quality-modelling-report.pdf> . The draft report on the AQMA review is within the Appendices.

Highways England have now identified a preferred route for improving the A428 which runs south of St Neots and directly affects traffic flows within St Neots. Highways England are currently undertaking further public consultation and are proposing to commence works in 2020/2021. More information can be seen at: <https://highwaysengland.co.uk/projects/a428-black-cat-to-caxton-gibbet/> . HDC will continue to liaise with Highways England on assessing the impact of the scheme on St Neots and other surrounding areas.

Huntingdonshire District Council also provides advice to members of the public regarding sustainability and energy saving measures and is working hard to reduce its own impact by improving energy efficiency of council owned buildings and continuing to support working from home opportunities; helping to reduce vehicle usage.

From January to July 2018, Cambridgeshire County Council undertook cycleway construction works between Bluntisham and Earith along with wider improvement works to other cycling and pedestrian infrastructure towards St. Ives. These works have improved sustainable transport links to St. Ives and nearby villages and enhanced the cycling network within the Huntingdonshire region.

HDC have also replaced the automatic air quality monitors located within the Huntingdon Air Quality Management Area, after securing funding from the Cambridgeshire County Council's Local Transport Fund to help towards purchasing the equipment. This will be discussed further in next year's ASR as the equipment

was replaced in April 2019. As well as replacing the automatic monitoring equipment, we have undertaken a review of the diffusion tube monitoring network within the district and introduced new locations as well as relocating some tubes.

Conclusions and Priorities

Exceedances of the NO₂ limit have been identified within the current Huntingdon AQMA, however overall there is a general downward trend in results indicating widespread compliance. After distance calculations have been applied to gain the annual mean concentration at the nearest relevant exposure receptor (residential property), there is no longer a breach. The calculation can be found in Appendix C.

Revocation is proposed for the St Neots, Fenstanton and Bramton AQMA's, subject to committee approval. As previously highlighted, the production of a new Air Quality Action Plan is not currently considered a priority, however this will be reviewed after the completion of the A14 works and assessment of the remaining AQMA to enable a more focussed and appropriate action plan to be produced, if required.

The re-routed A14 will significantly decrease the pollution levels currently experienced by many residents. Huntingdonshire District Council will continue to liaise with Highways England regarding the progress of this scheme, as well as the proposed upgrade of the A428, to minimise any impact on air quality.

The main priorities for HDC in relation to air quality are to:

- complete the review into the status of the AQMA's that continue to show monitoring compliance and take appropriate action;
- improve partnership working with planning and highways;
- ensure construction impacts are considered and mitigated for appropriate development proposals; and
- consider what further measures the Council can take to improve its own emissions.

These are discussed further in Section 2.2 below.

The ongoing challenge is to balance economic growth within Huntingdonshire, whilst ensuring compliance with the air quality objectives.

Local Engagement and How to get Involved

Members of the public can help to improve local air quality by reducing the number of car journeys undertaken, car sharing, using public transport, walking or cycling wherever possible (active travel), switching off car engines when stationary, purchasing energy efficient goods, improving energy efficiency at home and choosing to purchase a low emission car.

There is further information on our website under 'Sustainability and greener living' <http://www.huntingdonshire.gov.uk/>. The energy savings trust can also provide further advice at <http://www.energysavingtrust.org.uk/>. Another valuable source of information regarding air quality advice and how to minimise exposure is the www.cleanairday.org.uk website.

The use of wood burning stoves and open fires also contributes to air pollution and there are a number of steps members of the public who use these can take to reduce environmental and health impacts. More information can be found on our website here: <http://www.huntingdonshire.gov.uk/environmental-issues/noise-nuisance-pollution/air-quality/wood-burning-stoves/> .

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1 Local Air Quality Management

This report provides an overview of air quality in Huntingdonshire during 2018. 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 Huntingdonshire District Council 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 Appendix E.

2 Actions to Improve Air Quality

2.1 Air Quality Management Areas

Air Quality Management Areas (AQMA's) 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 AQMA's declared by Huntingdonshire District Council can be found in Table 2.1. Further information related to declared or revoked AQMA's, including maps of AQMA boundaries are available online at https://uk-air.defra.gov.uk/aqma/local-authorities?la_id=131 . Alternatively, see Appendix D: Map(s) of Monitoring Locations and AQMA's, which provides a map of air quality monitoring locations in relation to the AQMA's.

Due to continued compliance HDC propose to revoke St Neots, Fenstanton, and potentially Brampton AQMA's (see section 3).

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
HDC Air Quality Management Area Order No. 1 (Huntingdon: Nitrogen Dioxide)	16th November 2005 - amended 29th October 2007	NO ₂ Annual Mean	Huntingdon	An area encompassing approximately 2831 domestic properties affected by the A14, A141, B1044, B1514 and Huntingdon Inner Ring Road.	YES	96 Orthwaite 50.2 (2004)	µg/m ³	43.3ug/m ³ at PFH (3). 39.4ug/m ³ at RE (PFH 2)	µg/m ³	Cambridgeshire Joint Air Quality Action Plan	2009	www.huntingdonshire.gov.uk/media/3423/2009-joint-air-quality-action-plan.pdf
HDC Air Quality Management Area Order No. 2 (St Neots: Nitrogen Dioxide)	16th November 2005 - amended 29th October 2007	NO ₂ Annual Mean	St Neots	An area encompassing approximately 115 domestic properties affected by local traffic in the town centre.	No	26 High Street 45.2 (2004)	µg/m ³	28.7ug/m ³ at 8-10 High Street (St Neots 5) & RE	µg/m ³	Cambridgeshire Joint Air Quality Action Plan	2009	www.huntingdonshire.gov.uk/media/3423/2009-joint-air-quality-action-plan.pdf
HDC Air Quality Management Area Order No. 3 (Brampton)_	1st September 2006 - amended 29th October 2007	NO ₂ Annual Mean	Brampton	An area encompassing approximately 82 domestic properties affected by the A14.	Yes	16 Wood View 37.2 (2004)	µg/m ³	21ug/m ³ at 1 Laws Crescent (Brampton 3). 16.2ug/m ³ at RE	µg/m ³	Cambridgeshire Joint Air Quality Action Plan	2009	www.huntingdonshire.gov.uk/media/3423/2009-joint-air-quality-action-plan.pdf
HDC Air Quality Management Area Order No. 4 (Hemingford to Fenstanton: Nitrogen Dioxide)	1st September 2006	NO ₂ Annual Mean	Fenstanton	An area encompassing approximately 62 domestic properties affected by the A14.	Yes	Slipway, Huntingdon Road 46.2 (2004)	µg/m ³	25ug/m ³ at Hilton Road (Fenstanton 1) & RE	µg/m ³	Cambridgeshire Joint Air Quality Action Plan	2009	www.huntingdonshire.gov.uk/media/3423/2009-joint-air-quality-action-plan.pdf

☒ Huntingdonshire District Council confirm the information on UK-Air regarding their AQMAs is up to date

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

Defra's appraisal of last year's ASR concluded the following:

DEFRA conclusions	Huntingdonshire District Council comments
Alongside AQMA 2 which is currently undergoing revocation it is strongly recommended that the Council revoke AQMA 3 and 4 due to long standing compliance. It is suggested the Council pursue the fast track revocation process for these sites. For further Guidance please refer to LAQM Technical Guidance 16 (TG16).	A draft report reviewing the current AQMA's and providing an overview of options available is currently with management.
The report does not contain any detailed discussion of ongoing/anticipated development (industrial, residential, or retail). If there are notable developments or planning applications that may impact future air quality the Council are encouraged to discuss these in future reports.	Noted and complied with in the 2019 report. See page 2.
The Council recently reviewed their monitoring strategy, adding a number of new passive monitoring sites. This is supported. There are many more established sites that have recorded continuously low concentrations. The Council should review if any of these resources can be redeployed elsewhere in the District.	2 Tubes were redeployed & additional tubes introduced at the beginning of 2019 for reporting purposes. We have a contract with the lab and intend to fully review tube locations & number after that expires in 2022, also enabling full monitoring of the impact on air quality from the relocation of the A14. In the meantime, if concerns are raised regarding other locations they will be investigated and tubes relocated if considered appropriate.
Generally the report is very good, well detailed and meets the criteria specified in relevant standards. The Council has been effective in reducing air quality emissions and should continue their hard work.	Noted.

As well as the actions discussed above in the Executive Summary section, such as supporting promotional campaigns, partnership working and improved cycling infrastructure, Huntingdonshire District Council has taken forward a number of direct measures during the current reporting year of 2018 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 2.2.

As stated in last year's ASR, it should be noted that these measures originate from the Cambridgeshire Air Quality Action Plan and hence have remained the same for a number of years. Huntingdonshire District Council are in the process of reviewing the St Neots, Brampton and Fenstanton AQMA's, with a view to revocation. Once the A14 works have been completed the AQMA in Huntingdon will be reviewed and if necessary a new Action Plan, with updated more appropriate and targeted measures provided.

Key completed measures are:

Measurement 1: The A14 upgrade is currently being constructed with an estimated completion date of 2020. This remains on track.

Measurement 2: Implementation of air quality policies in local plan is currently on going. The Local Plan for Huntingdonshire to the year 2036 was formally adopted at full Council on 15 May 2019. Within the *'Parking provision and vehicle movement'* section on page 78, paragraph 5.60 states:

'It is suggested that at least one charging point for an electric vehicle should be provided where a proposal includes 20 or more parking spaces and that 1 charging point is provided for every 50 spaces'.

It is hoped this will encourage the use of electrically powered vehicles, in line with National Planning Policy.

In an attempt to ensure air quality is considered, officers are advising the Local Planning Authority, air quality consultants and developers, that the current advice from public health experts is that the health impacts of air quality should be minimised, even if there is no risk that air quality standards will be breached. Therefore even if the effect is judged to be insignificant consideration should be given

to the application of good design and good practice measures, including electric vehicle rapid charge points.

Measurement 3: Development of an effective freight partnership. Now that the A14 will be moved away from the residential areas it is not expected that freight will cause a significant issue within Huntingdonshire. Therefore no further action will be taken. This will be reassessed once the A14 works have been completed.

Measurement 4: Inclusion of Huntingdonshire in the Quality Bus Partnership (QBP). Cambridgeshire County Council has not extended the QBP to outside Cambridge City, and currently has no plan to do so. Therefore no further action will be taken. This will be reassessed once the A14 works have been completed.

Measurement 5: The guided bus route is complete and operational.

Measurement 6: Smart traffic lights at St Neots have been installed and are operational.

Huntingdonshire District Council's priorities for the coming year are:

- The review and proposed revocation of the St Neots, Brampton and Fenstanton AQMAs (AQMA 2, 3 & 4). Following a number of years meeting the objectives, and completion of a detailed modelling assessment (for St Neots) demonstrating the air quality standards and objectives are being achieved (and are likely throughout the relevant period to be achieved within the designated area) a draft report reviewing the AQMA's is currently with management. The Council has therefore entered the process of revocation and is awaiting management and ultimately committee approval, prior to the Orders being made. Defra are in support of this proposal, stating the following in their appraisal report of the 2018 ASR:

'Alongside AQMA 2 which is currently undergoing revocation it is strongly recommended that the Council revoke AQMA 3 and 4 due to long standing compliance'.

The revocation of AQMA 2 was delayed so all three can be considered together.

The detailed modelling assessment of NO₂ concentrations for St Neots can be viewed on our website at: <http://www.huntingdonshire.gov.uk/media/3245/st-neots-air-quality-modelling-report.pdf> . Due to the size of the report it has not been included in the Appendices. The draft report for the review of AQMA's has been included within the Appendix C but please note this is in draft format.

- Ensure the effective operation of the new Air Quality Monitoring Station to enable the collection of meaningful data
- Improve Partnership working, especially with Planning and Highways.
- Ensure construction impacts are considered and mitigated for appropriate development proposals; and
- Consider what further measures the Council can take to improve its own emissions.

Huntingdonshire District Council anticipates that the measures stated above and in Table 2.2 will achieve compliance in AQMA 1 Huntingdon, and continued compliance in AQMA 2 St Neots, AQMA 3 Brampton and AQMA 4 Hemingford to Fenstanton.

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	Re-routing of A14 away from settlements	Traffic Management	Strategic highway improvements, Re-prioritising road space away from cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	Highways England	Current	Current	Monitoring should indicate a reduction when relocation of road completed	AQMA's 1, 3 & 4 should meet requirements	Scheme being undertaken	2020	Lengthy Timescale but expected to improve all AQMA's (after revocation of St Neots)
2	Implementation of air quality policies in the local plan.	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	Huntingdonshire District Council	Ongoing	Ongoing	N/A	All	Implementation on-going	Ongoing	Highlighting AQ aspects and measures for reduction ongoing
3	Development of an effective freight partnership	Freight and Delivery Management	Other	Not currently progressing	Not currently progressing	Not currently progressing	N/A	All	None	Unknown	Now the A14 improvement has been agreed and Highways England have opened communication on improving the A428 it is unknown if an effective freight partnership would have any significant effect. This will be re-evaluated once changes have been monitored.
4	Inclusion of Huntingdonshire in the Quality Bus Partnership	Alternatives to private vehicle use	Other	Cambridgeshire County Council	No current plan for HDC to be included	No current plan for HDC to be included	N/A	All	None	None	At present CCC do not consider that it is feasible to run the QBP outside the city of Cambridge. This is something we will continue to consider.

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5	Completion and opening of Cambridgeshire Guided Busway	Transport Planning and Infrastructure	Bus route improvements	Cambridgeshire County Council	Completed	Completed	Unknown	All	Completed	Completed	The guided busway was opened in August 2011 from Cambridge Huntingdon and extended to Peterborough in July 2012.
6	Change to traffic-light system in St Neots High street as specified in the St Neots Markets Town Strategy	Traffic Management	Strategic highway improvements, Re-prioritising road space away from cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	Cambridgeshire County Council	Completed	Completed	AQ monitoring indicates a reduction	Reduction in AQMA 2 St Neots	Completed	Completed	Works completed in 2013. Modelling undertaken in 2017 demonstrates AQ limits are being met and HDC are in the process of revoking the AQMA. See Section 2.2

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.

Huntingdonshire District Council is taking the following measures to address PM_{2.5}:

- The measures discussed above in section 2.2 and table 2.2 will help to reduce PM_{2.5} as well as other pollutants.
- It is expected that the upgrade to the A14 which will move the trunk road away from major residential areas will reduce PM_{2.5} significantly (Measurement 1 in table 2.2).
- In 2014 Huntingdonshire District Council joined with Public Health England and the other Cambridgeshire authorities to develop the transport and health joint strategic needs survey which focused on PM_{2.5} from transport, see <http://www.cambridgeshireinsight.org.uk/file/2552/download>
- Huntingdonshire District Council is intending to review and update the Council's Air Quality Action Plan once further assessments of the current AQMAs have been undertaken this year.
- Continue to liaise with the Local Planning Authority and developers requesting pre-app advice, to ensure air quality mitigation measures are considered for large developments to minimise any impact (Measurement 2 in table 2.2).
- Continue to advise planning conditions to require a Construction Environmental Management Plan when necessary, in order to control dust from demolition and construction activities.
- The PM_{2.5} monitor has been updated (installed April 2019). This is located within the Huntingdon AQMA at Pathfinder House (PFH). This location is currently the only site where we have evidence the NO₂ objective is being breached and is therefore considered to represent a reasonable worst case scenario. The new equipment will enable more reliable results and it is hoped

sufficient data will be gathered during 2019 to be able to provide a better overview of the PM_{2.5} levels within next year's ASR.

- Informing the public of key advice documents, such as those provided by Defra regarding the reduction of air pollution from the use of wood burning stoves and open fires.
- Supporting Clean Air Day, signposting members of the public and schools to resources and advice regarding air quality and promotion of air quality information.
- Attendance at the quarterly Cambridgeshire Pollution Prevention Group meetings where issues such as air quality are discussed with representatives from other adjoining Local Authorities, The County Council and the Environment Agency to discuss best practice.

Some of the above point's link in with the Public Health Outcomes Framework (PHOF) which includes an indicator for air pollution due to the extensive evidence of the health impacts associated with it. The PHOF aims to increase healthy life expectancy, reduce differences in life expectancy and have healthy life expectancy between communities. The indicators are designed to demonstrate how well public health is being improved and protected and encourage partnership working and involvement.

Cambridgeshire County Council elected members have recognised the impacts of poor air quality and at Full Council in October 2018 they passed a resolution to work with their partner councils and other public bodies towards promoting a programme of active participation across Cambridgeshire to address air pollution more collaboratively, including the development of communication resources, training and learning events, guidance for communities on air quality monitoring, and collaborative working.

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.

Huntingdonshire District Council undertook automatic (continuous) monitoring at one site during 2018. Table A.1 in Appendix A shows the details of the site. National monitoring results are available at <https://uk-air.defra.gov.uk/interactive-map>. Air quality data from the automatic continuous monitor is available via our website or directly at: https://www.airqualityengland.co.uk/site/data?site_id=HUN01

Maps showing the location of the monitoring sites are provided in Appendix D.

Huntingdonshire District Council have a service contract with Air Monitors and Quality Assurance/Quality Control (QA/QC) audits are completed by Ricardo. Further details on how the monitors are calibrated and how the data has been adjusted are included in Appendix C.

Unfortunately there were again issues with the monitoring equipment in 2018. Following an issue with the air conditioning equipment the monitors stopped functioning correctly. There were delays in the problem identification and remediation for initially the air conditioning equipment (during which time the analysers had to be switched off to prevent further damage), and then the analysers themselves, resulting in substantial downtime when the equipment was either not operational or operating with a high level of uncertainty. As there had been problems over the previous 2 – 3 years and due to the age of the equipment, the decision was therefore taken to replace the analysers to ensure meaningful and accurate data can be collected and utilised. The replacement units were installed in April 2019 and will be discussed further in next year's ASR. The air conditioning equipment was replaced in July 2018.

3.1.2 Non-Automatic Monitoring Sites

Huntingdonshire District Council undertook non- automatic (passive) monitoring of NO₂ at 53 sites during 2018. Table A.2 in Appendix A shows the details of the sites.

Maps showing the location of the monitoring sites are provided in Appendix D. The tubes are supplied and analysed under contract with SOCOTEC at Didcot a UKAS accredited laboratory. Further details on this, including bias adjustments and distance correction, are included in Appendix C.

3.2 Individual Pollutants

The air quality monitoring results presented in this section are, where relevant, adjusted for bias, “annualisation” and distance correction. Further details on adjustments are provided in Appendix C.

3.2.1 Nitrogen Dioxide (NO₂)

Table A.3 in Appendix A compares the ratified and adjusted monitored NO₂ annual mean concentrations for the past 5 years with the air quality objective of 40µg/m³. It can be seen in 2018 that there were three tubes which breached this and they were all located at one site (Pathfinder House – PFH1 (40.8µg/m³), PFH2 (41.4µg/m³) and PFH3 (43.3µg/m³)) within the Huntingdon AQMA, which can be seen in Appendix D. Overall there has been a general downward trend in NO₂ results and there were no other sites within 10% of the objective, unlike last year. The location of the 3 tubes that breached the objective is not representative of the nearest receptor and therefore a distance calculation was completed utilising the Defra calculator, the results of which are shown in Table B1. The calculations and additional information regarding this can be found in Appendix C.

For diffusion tubes, the full 2018 dataset of monthly mean values is provided in Appendix B.

Table A.4 in Appendix A compares the ratified continuous monitored NO₂ hourly mean concentrations for the past 5 years with the air quality objective of 200µg/m³, not to be exceeded more than 18 times per year. The data from the analyser is unreliable, however looking at the trend over the last 5 years and the diffusion tube data it is likely this objective was complied with, especially as there were no annual means greater than 60 µg/m³, indicating that an exceedance of the 1-hour mean objective was unlikely.

Both the automatic monitor and diffusion tube network achieved greater than 75% data capture and therefore no annualisation was required. All data has been

properly ratified and corrected for bias where applicable. A distance correction has been completed for monitoring locations where an annual mean concentration has been recorded as above the NO₂ annual objective of 40µg/m³. This related to three tubes, all located at Pathfinder House. The distance calculation indicated no breach at the nearest relevant receptor and the results can be seen in table B1. We didn't have any sites that were within 10% of the objective (i.e. above 36 µg/m³), so no further distance corrections were required, in line with Defra guidance.

Due to the low data capture and concerns over accuracy of the data gained by the NO₂ analyser, the national bias adjustment figure has been utilised for the diffusion tubes. Some residents have queried the need for completing bias adjustment on the diffusion tube results and it should be noted that this is to account for the inherent uncertainty in diffusion tube monitoring concentration data and is in line with government guidance (paragraph 7.78 of TG16). The methodology for gaining the bias adjustment figure can be found in Appendix C.

As discussed earlier the overall trend in the district was that NO₂ results continue to decrease both inside and outside the AQMAs, with only 4 locations slightly increasing (Buckden 1, Huntingdon 1, St Neots 2 & Godmanchester 1). In some areas there appears to have been a significant reduction for example at Stibbington where the reduction was 7µg/m³ as indicated on the graphs in figure A.1 below. This could be down to a number of reasons and it will be interesting to see the results for 2019 and how they compare, especially with the introduction of the new monitoring equipment. No additional locations are exceeding the objectives compared with last year.

3.2.2 Particulate Matter (PM₁₀)

Error! Reference source not found. Appendix A compares the ratified and adjusted monitored PM₁₀ annual mean concentrations for the past 5 years with the air quality objective of 40µg/m³, and Table A. compares the ratified continuous monitored PM₁₀ daily mean concentrations for the past 5 years with the air quality objective of 50µg/m³, not to be exceeded more than 35 times per year.

Unfortunately due to problems with the analyser insufficient data was collected for this year. The unit has now been replaced and more accurate data should be presented in the next ASR. In the meantime current PM₁₀ results can be viewed

online at the Air Quality England website at https://www.airqualityengland.co.uk/site/data?site_id=HUN01 where data can be downloaded.

3.2.3 Particulate Matter (PM_{2.5})

Table A. in Appendix A presents the ratified and adjusted monitored PM_{2.5} annual mean concentrations for the past 5 years.

Huntingdonshire District Council has been monitoring PM_{2.5} since 2014 and each year there has been a slight reduction in the levels measured. The low data capture this year has increased uncertainty and as with the PM₁₀ monitor this unit has been replaced so more accurate results should be available for reporting in next year's ASR.

Appendix A: Monitoring Results

Table A.1 – 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)
PFH	Huntingdon	Roadside	524102	271540	NO2, PM10, PM2.5	YES	Chemiluminescent Beta Attenuation, Beta Attenuation	3	7	2.5

Table A.2 – 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)
St Neots 1	The Paddocks	Kerbside	517869	260132	NO2	NO	22	22	NO	3
St Neots 2	18 Cromwell Gardens	Roadside	519541	260280	NO2	NO	8	4	NO	3
St Neots 3	71 Avenue Road	Urban Background	518925	260503	NO2	NO	4	1	NO	3
St Neots 4	20 Harland Road	Urban Background	518489	260871	NO2	NO	3	1	NO	3
St Neots 5	8-10 High Street (Post Office)	Kerbside	518323	260263	NO2	YES	0	1	NO	3
St Neots 6	35 High Street (Traffic lights)	Kerbside	518433	260321	NO2	YES	0	1	NO	3
St Neots 7	17 Arundel Crescent	Suburban	518424	258556	NO2	NO	0	17	NO	1.75
St Neots 8	122 Lindisfarne Close	Suburban	518707	258260	NO2	NO	4	31	NO	3
St Neots 9	5 Duchess Close	Suburban	516370	259514	NO2	NO	3	5 (24m to trunk road)	NO	3
Southoe 1	2 Lees Lane	Roadside	518714	264308	NO2	NO	24	2 (14m to trunk road)	NO	1.75
Buckden 1	6 Perry Road	Roadside	518981	267370	NO2	NO	0	12 (10m to trunk road)	NO	1.75
Buckden 2	4 High Street (Roundabout)	Roadside	519082	267433	NO2	NO	0	1 (35m to trunk road)	NO	1.75

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Buckden 3	34 High Street (shop)	Roadside	519161	267624	NO2	NO	0	1	NO	2
Buckden 4	11 Taylors Lane	Roadside	519197	267955	NO2	NO	3	1	NO	3
Brampton 1	RAF Brampton (Sparrow Close)	Roadside	520734	269623	NO2	NO	10	0.5	NO	3
Brampton 2	RAF Brampton - Sokemans Way	Roadside	520500	269646	NO2	NO	10	1.5	NO	3
Brampton 3	1 Laws Crescent	Roadside	520155	271561	NO2	YES	32	2	No	3
Brampton 4	25 Dorling Way	Roadside	519956	271461	NO2	NO	6	1.5	No	3
Brampton 5	7 Hansell Road	Roadside	519839	271061	NO2	NO	18	0.5	No	3
Catworth 1	1 Thrapston Road	Rural	508409	274876	NO2	NO	42	42 (42m to trunk road)	NO	3
PFH 1	Pathfinder House	Roadside	524102	271540	NO2	YES	8	6	YES	3.6
PFH 2	Pathfinder House	Roadside	524102	271540	NO2	YES	8	6	YES	3.6
PFH 3	Pathfinder House	Roadside	524102	271540	NO2	YES	8	6	YES	3.6
Huntingdon 1	23 Lodge Close	Suburban	523177	271627	NO2	NO	3	2	NO	3
Huntingdon 2	19 Nursery Road	Kerbside	524198	271949	NO2	YES	0	1	NO	1.75
Huntingdon 3	6 George Street	Kerbside	523661	271802	NO2	YES	0	1	NO	3
Huntingdon 4	1 St Peters Road	Kerbside	523435	272464	NO2	YES	3	1	NO	3
Huntingdon 5	18 Blethan Drive	Roadside	522293	272909	NO2	YES	3	2	NO	3
Huntingdon 6	40 Hartford Road	Roadside	524274	271939	NO2	YES	4	2	NO	3
Godmanchester 1	25 Cambridge Villas	Roadside	525319	270571	NO2	NO	3	12 (34m to trunk road)	NO	3
Wood Green Animal Shelter	Goat enclosure	Rural	526250	268264	NO2	NO	0	235	NO	3
Fenstanton 1	Hilton Road	Roadside	531427	268397	NO2	YES	20	2 (20m to trunk road)	NO	3
Fenstanton 2	20 Connington Road	Roadside	531770	268215	NO2	YES	14	2 (23m to trunk road)	NO	3

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Fenstanton 3	1 Pear Tree Close	Rural	531063	268063	NO2	NO	6	1.5	NO	3
St Ives 1	2 The Pound	Urban Background	531206	272334	NO2	NO	5	1	NO	3
St Ives 2	59 Greenfields	Suburban	530850	270286	NO2	NO	6	1.5	NO	3
St Ives 3	6 Goldie Close	Roadside	529866	272285	NO2	NO	11	6	NO	3
Ramsey 1	5 Blenheim Road	Urban Background	528433	284936	NO2	NO	4	2	NO	3
Yaxley 1	2 London Road	Roadside	517480	292309	NO2	NO	13	2	NO	3
Stibbington 1	7 Great North Road	Roadside	508326	298684	NO2	NO	22	2 (8m to trunk road)	NO	3
Alwalton 1	2 Royce Road	Roadside	513132	295723	NO2	NO	11	4 (61m to trunk road)	NO	3
Sawtry 1	81 Fen Lane	Suburban	517440	283443	NO2	NO	4	2	NO	3
Alconbury 1	54 Manor Lane	Roadside	518954	276010	NO2	NO	6	2	NO	3
Great Stukeley 1	Church of Jesus Christ - Ermine Street	Roadside	522000	274607	NO2	NO	33	1	NO	3
Huntingdon 7	6 Brampton Road	Roadside	523432	271760	NO2	YES	10	2	NO	3
Huntingdon 8	Main Road	Roadside	525289	272525	NO2	NO	27	2	NO	3
Hilton 1	1 Westbrook Close	Suburban	528836	266538	NO2	NO	10	1	NO	3
Fenstanton 4	25 High Street	Roadside	531729	268370	NO2	NO	1.5	1	NO	3
Alconbury 2	Lords Ways	Suburban	518955	275520	NO2	NO	10	1	NO	3
Brampton 6	Parish Hall Church Road	Roadside	521487	270803	NO2	NO	19	1	NO	3
Brampton 7	52 Elizabethan Way	Suburban	519874	270948	NO2	NO	7	1.5	NO	3

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Offord D'Arcy 1	42 Gravely Road	Suburban	522127	266105	NO2	NO	11	3	NO	3
Offord Cluny 2	168 High Street	Roadside	521947	267178	NO2	NO	11	3	NO	3

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 NO₂ Monitoring Results

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2018 (%) ⁽²⁾	NO ₂ Annual Mean Concentration (µg/m ³) ⁽³⁾				
					2014	2015	2016	2017	2018
PFH	Roadside	Automatic	80.84	80.84	38.9	32.2	39.4	31.9	28
St Neots 1	Kerbside	Diffusion Tube	100	100	19.6	20.5	22.1	21.6	17.5
St Neots 2	Roadside	Diffusion Tube	100	100	N/A	N/A	N/A	20.3	20.7
St Neots 3	Urban Background	Diffusion Tube	100	100	19	16.6	18.3	16.9	15.0
St Neots 4	Urban Background	Diffusion Tube	100	100	15.3	14.3	16.8	15.4	13.9
St Neots 5	Kerbside	Diffusion Tube	100	100	36	31.7	31.3	31.2	28.7
St Neots 6	Kerbside	Diffusion Tube	100	100	31.6	28.7	29.6	29.9	28.4
St Neots 7	Suburban	Diffusion Tube	100	100	20.3	19.9	20.5	19.9	17.4
St Neots 8	Suburban	Diffusion Tube	100	100	N/A	N/A	N/A	20.1	18.8
St Neots 9	Suburban	Diffusion Tube	100	100	23.5	24.5	28.4	28.1	22.4
Southoe 1	Roadside	Diffusion Tube	100	100	19.2	17.4	18.6	16.2	16.2
Buckden 1	Roadside	Diffusion Tube	100	100	26.8	21.2	24.9	20.8	21.9
Buckden 2	Roadside	Diffusion Tube	100	100	25.3	25.6	25.8	25.6	19.7
Buckden 3	Roadside	Diffusion Tube	100	100	32.2	28.9	29.6	27.7	25.4
Buckden 4	Roadside	Diffusion Tube	100	100	19.5	19.4	22.3	18.7	15.8
Brampton 1	Roadside	Diffusion Tube	100	100	14.1	14.4	15.4	14.3	13.1
Brampton 2	Roadside	Diffusion Tube	100	100	N/A	16.8	16.3	15.6	15.2
Brampton 3	Roadside	Diffusion Tube	100	100	25.6	22.7	27	23.9	21.0
Brampton 4	Roadside	Diffusion Tube	100	100	N/A	18.8	19.8	17.4	16.3

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Brampton 5	Roadside	Diffusion Tube	100	100	16.9	15.9	17.5	15.7	13.4
Catworth 1	Rural	Diffusion Tube	100	100	21.7	21.6	18.9	20.3	15.8
PFH 1	Roadside	Diffusion Tube	100	100	49.5	44.2	45.1	42.5	40.8
PFH 2	Roadside	Diffusion Tube	100	100	52	44.7	46.1	44.4	41.4
PFH 3	Roadside	Diffusion Tube	100	100	52.8	46.6	44.8	44.9	43.3
Huntingdon 1	Suburban	Diffusion Tube	100	100	18.5	17.1	19.3	15.9	17.0
Huntingdon 2	Kerbside	Diffusion Tube	100	100	22.7	21	22.2	25.4	23.5
Huntingdon 3	Kerbside	Diffusion Tube	100	100	41.1	40.7	39.9	38.8	34.0
Huntingdon 4	Kerbside	Diffusion Tube	100	100	28.9	29.9	28.7	28.3	27.4
Huntingdon 5	Roadside	Diffusion Tube	100	100	27	27.6	26.9	26.5	24.6
Huntingdon 6	Roadside	Diffusion Tube	100	100	25.2	23.7	25.2	24.7	21.6
Godmanchester 1	Roadside	Diffusion Tube	100	100	23.8	22.7	24.8	22.0	22.1
Wood Green Animal Shelter	Rural	Diffusion Tube	100	100	N/A	12.4	13.7	14.1	12.7
Fenstanton 1	Roadside	Diffusion Tube	100	100	32.8	31.5	31.2	31.9	25.0
Fenstanton 2	Roadside	Diffusion Tube	92	92	22.5	19.9	20	20.7	18.8
Fenstanton 3	Rural	Diffusion Tube	100	100	N/A	13.7	13.8	13.6	12.4
St Ives 1	Urban Background	Diffusion Tube	100	100	18.7	17.6	18.6	19.0	16.3
St Ives 2	Suburban	Diffusion Tube	100	100	N/A	21.3	22.9	23.2	19.3
St Ives 3	Roadside	Diffusion Tube	100	100	N/A	N/A	N/A	16.4	15.9
Ramsey 1	Urban Background	Diffusion Tube	100	100	18	17.8	19.7	18.1	17.2
Yaxley 1	Roadside	Diffusion Tube	100	100	N/A	N/A	N/A	28.5	27.8
Stibbington 1	Roadside	Diffusion Tube	100	100	26.5	29.6	28.6	29.8	22.8
Alwalton 1	Roadside	Diffusion Tube	100	100	N/A	N/A	N/A	20.1	19.2
Sawtry 1	Suburban	Diffusion Tube	100	100	21.8	20.9	22.3	23.0	20.3

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Alconbury 1	Roadside	Diffusion Tube	100	100	21.4	19.9	21.8	19.2	19.0
Great Stukeley 1	Roadside	Diffusion Tube	100	100	N/A	N/A	N/A	18.7	16.4
Huntingdon 7	Roadside	Diffusion Tube	100	100	N/A	36.4	34.6	37.4	30.7
Huntingdon 8	Roadside	Diffusion Tube	100	100	N/A	N/A	N/A	23.4	20.5
Hilton 1	Suburban	Diffusion Tube	100	100	N/A	N/A	N/A	11.9	10.8
Fenstnton 4	Roadside	Diffusion Tube	100	100	N/A	N/A	N/A	23.1	19.2
Alconbury 2	Suburban	Diffusion Tube	92	92	N/A	17.7	15.9	15.4	11.2
Brampton 6	Roadside	Diffusion Tube	92	92	N/A	N/A	N/A	23.6	20.7
Brampton 7	Suburban	Diffusion Tube	100	100	N/A	N/A	N/A	14.5	11.6
Offord D'Arcy 1	Suburban	Diffusion Tube	100	100	N/A	N/A	N/A	11.4	10.7
Offord Cluny 2	Roadside	Diffusion Tube	100	100	N/A	N/A	N/A	16.9	16.0

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

☐ **Annualisation has been conducted where data capture is <75% - Not required as none under 75%**

Notes:

Exceedances of the NO₂ annual mean objective of 40µg/m³ are shown in **bold**.

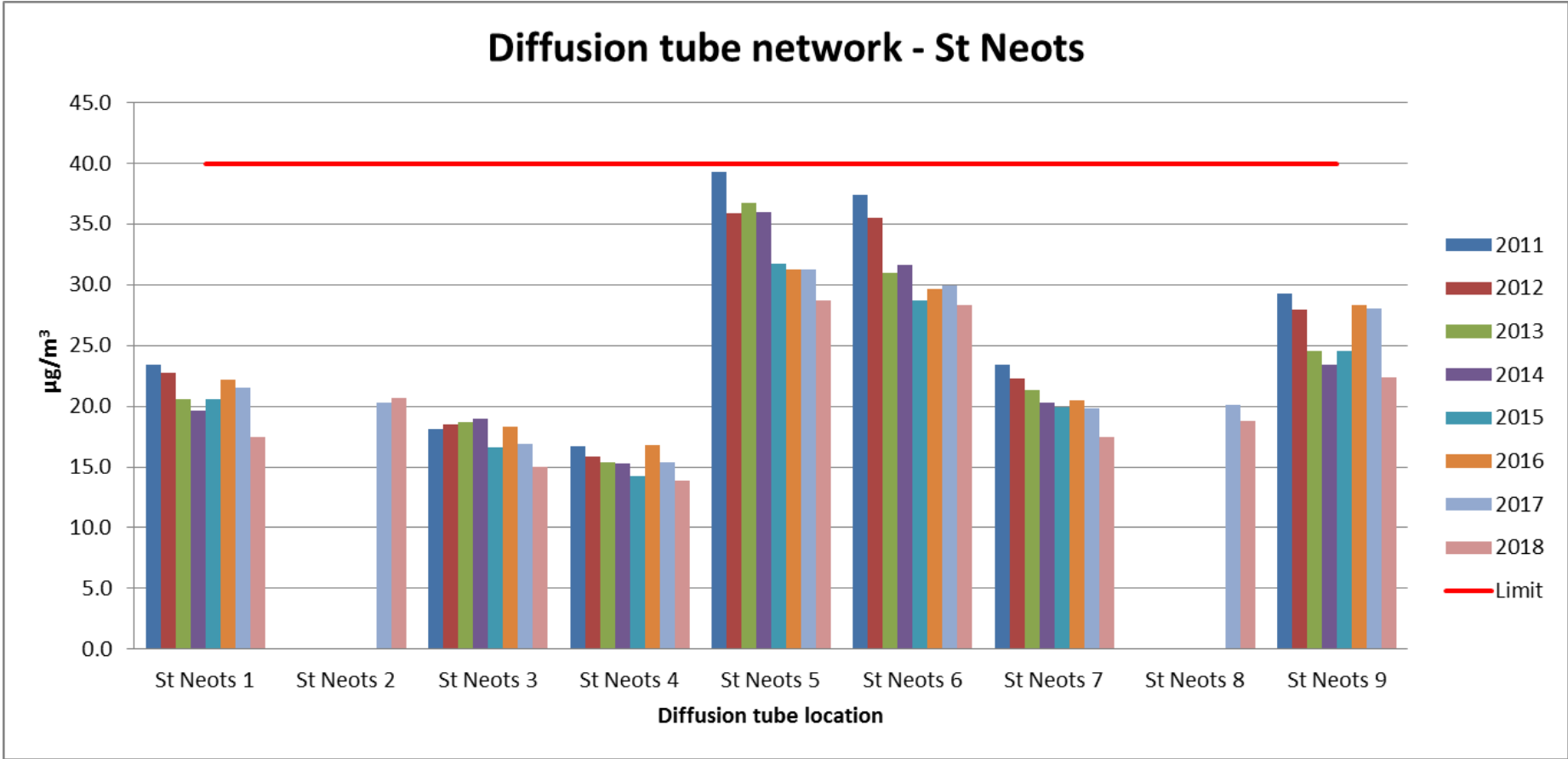
NO₂ annual means exceeding 60µg/m³, indicating a potential exceedance of the NO₂ 1-hour mean objective are shown in **bold and underlined**.

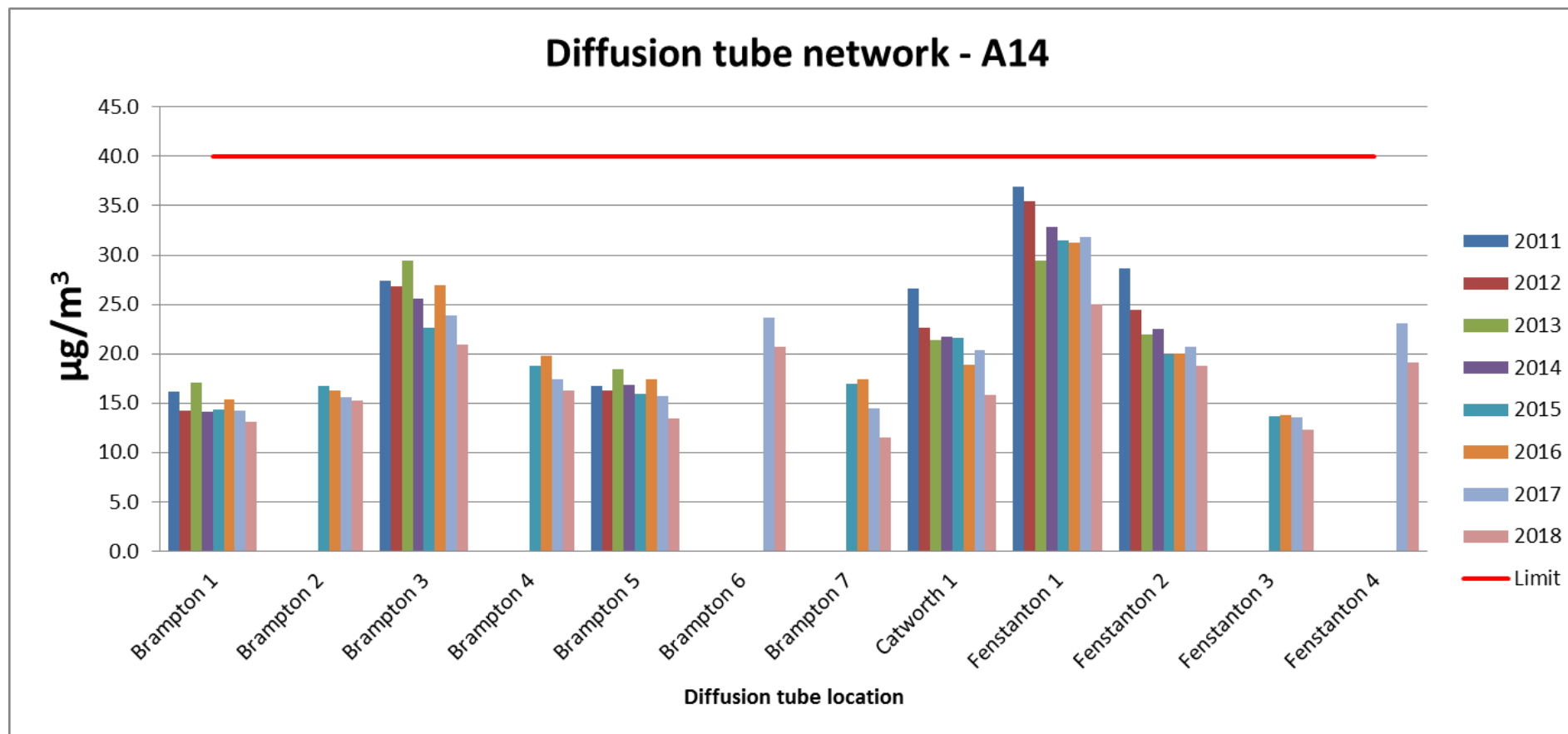
(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

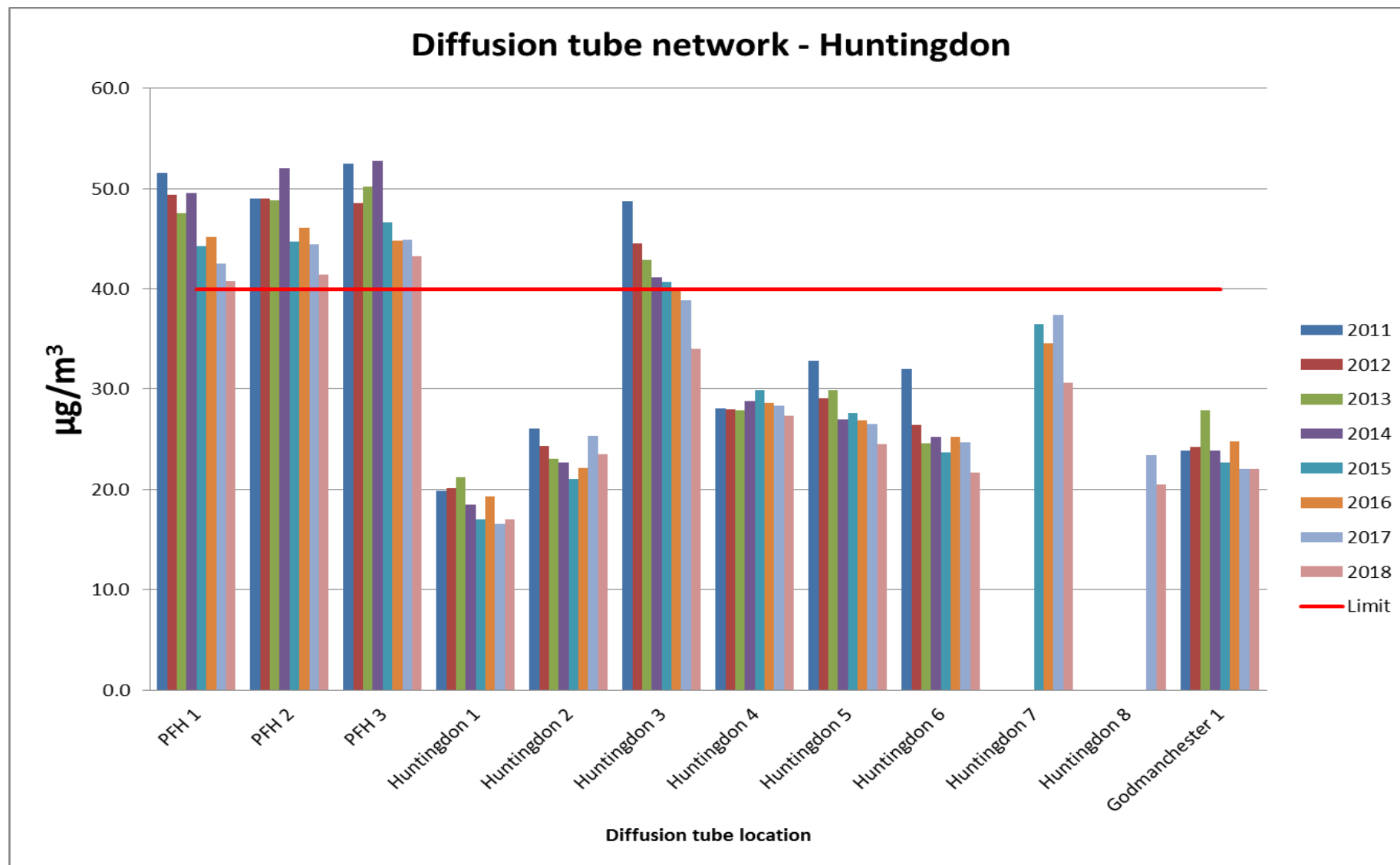
(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

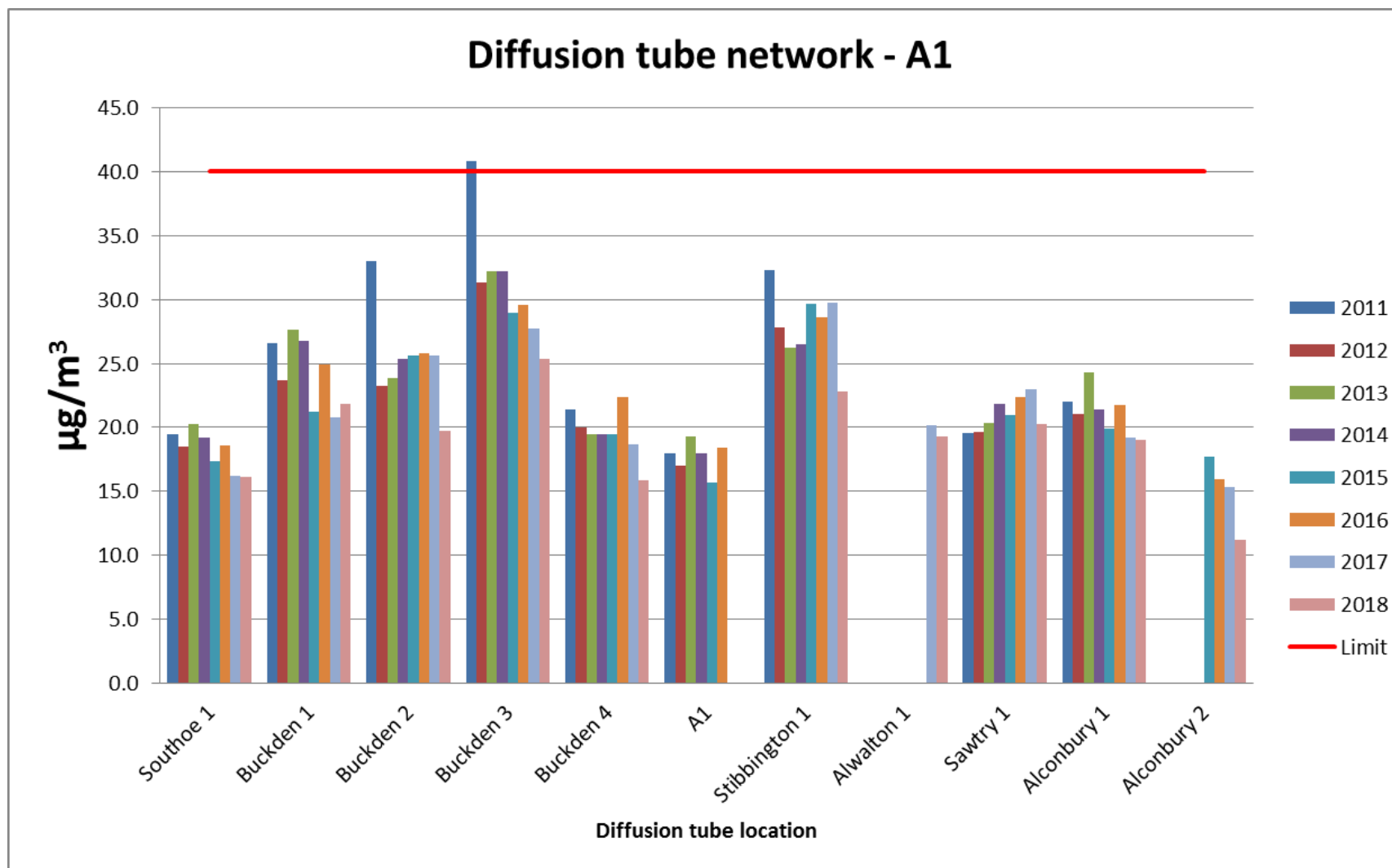
(3) Means for diffusion tubes have been corrected for bias. All means have been “annualised” as per Boxes 7.9 and 7.10 in LAQM.TG16 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

Figure A.1 – Trends in Annual Mean NO₂ Concentrations









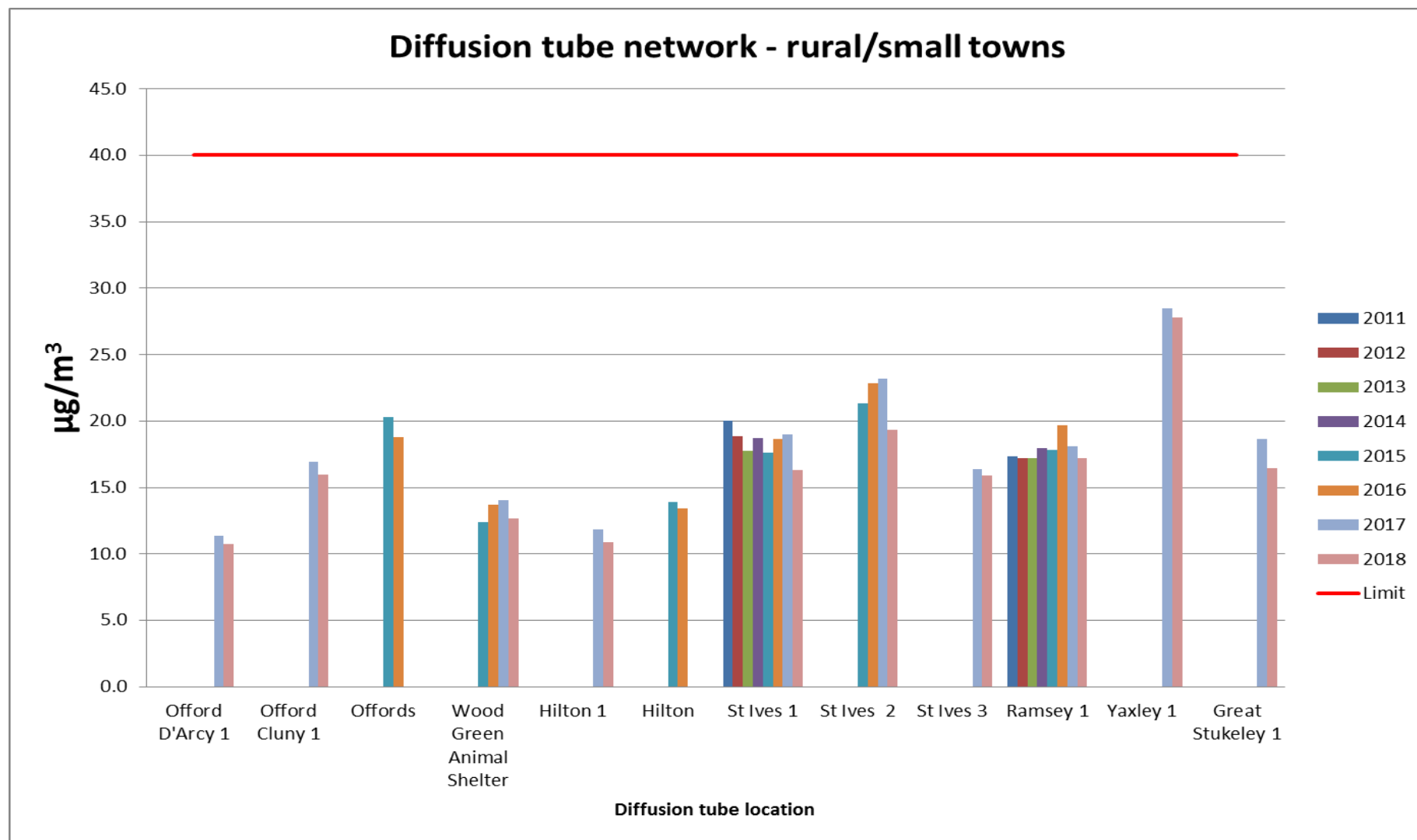


Table A.4 – 1-Hour Mean NO₂ Monitoring Results

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2018 (%) ⁽²⁾	NO ₂ 1-Hour Means > 200µg/m ³ ⁽³⁾				
					2014	2015	2016	2017	2018
PFH	Roadside	Automatic	80.84	80.84	0	0	0	0	0

(99.8th Percentile of hourly mean 2018 = 93ug/m³)**Notes:**

Exceedances of the NO₂ 1-hour mean objective (200µg/m³ 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 PM₁₀ Monitoring Results

Site ID	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2018 (%) ⁽²⁾	PM ₁₀ Annual Mean Concentration (µg/m ³) ⁽³⁾				
				2014	2015	2016	2017	2018
PFH	Roadside	0	0	20.49	19.34	20.39	18.4	No Data

☐ Annualisation has been conducted where data capture is <75% - No data due to monitor.

Notes:

Exceedances of the PM₁₀ annual mean objective of 40µg/m³ 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.

Figure A.2 – Trends in Annual Mean PM₁₀ Concentrations

2018 data not included – no data available.

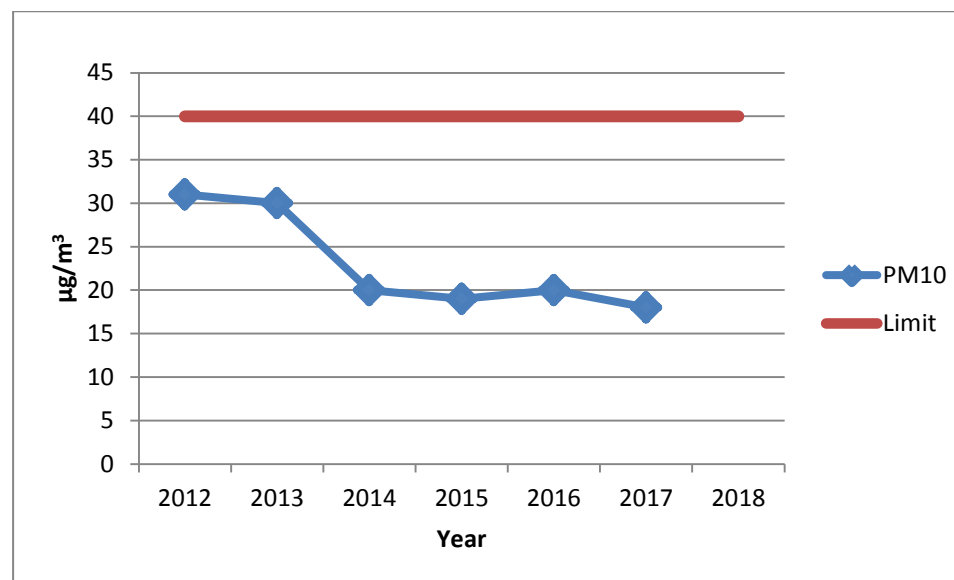


Table A.6 – 24-Hour Mean PM₁₀ Monitoring Results

Site ID	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2018 (%) ⁽²⁾	PM ₁₀ 24-Hour Means > 50µg/m ³ ⁽³⁾				
				2014	2015	2016	2017	2018
PFH	Roadside	0	0	6	3	5	7	No Data

Notes:

Exceedances of the PM₁₀ 24-hour mean objective (50µg/m³ 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.

Figure A.3 – Trends in Number of 24-Hour Mean PM₁₀ Results >50µg/m³

2018 data not included – no data available.

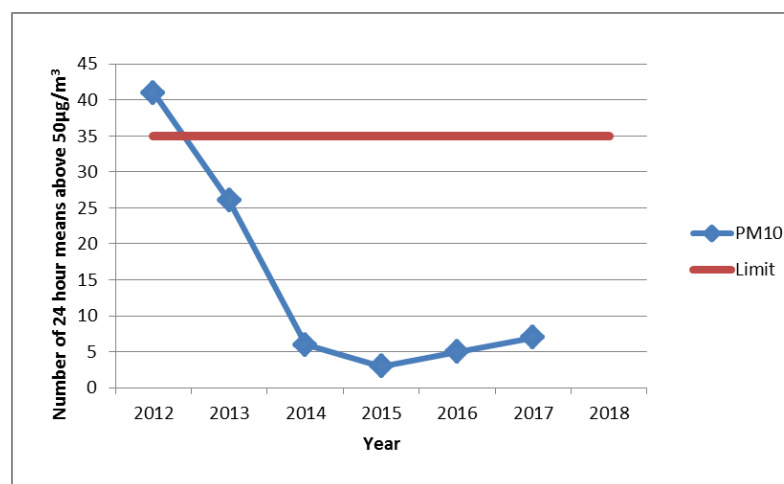


Table A.7 – PM_{2.5} Monitoring Results

Site ID	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2018 (%) ⁽²⁾	PM _{2.5} Annual Mean Concentration (µg/m ³) ⁽³⁾				
				2014	2015	2016	2017	2018
PFH	Roadside	58.13	58.13	13.9	12.3	11.8	10.6	11.7

☒ Annualisation has been conducted where data capture is <75% (confirm by selecting in box)

Notes:

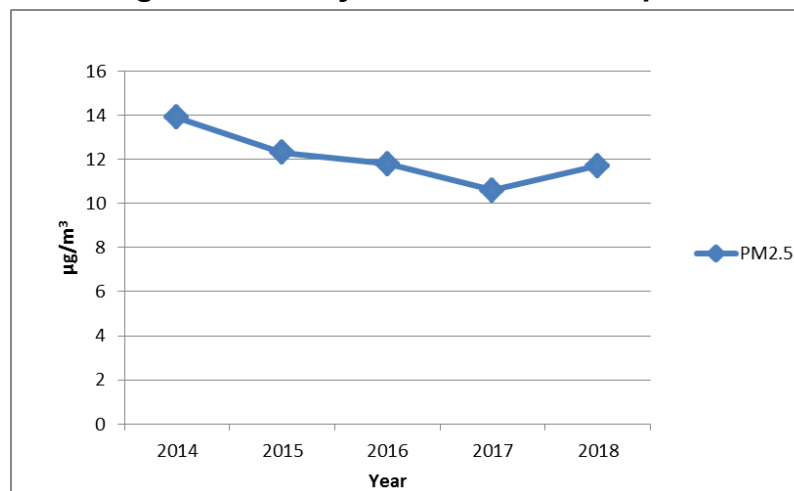
(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(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.

Figure A.4 – Trends in Annual Mean PM_{2.5} Concentrations

High uncertainty due to low data capture



Appendix B: Full Monthly Diffusion Tube Results for 2018

Table B.1 – NO₂ Monthly Diffusion Tube Results - 2018

Site ID	NO ₂ Mean Concentrations (µg/m ³)														
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean		
													Raw Data	Bias Adjusted (0.76) and Annualised ⁽¹⁾	Distance Corrected to Nearest Exposure ⁽²⁾
St Neots 1	25.5	27.2	28.3	20.8	17.4	16.0	17.2	19.5	24.5	26.5	24.3	28.9	23.0	17.5	
St Neots 2	35.3	33.2	32.4	25.8	21.1	21.8	22.5	19.7	25.1	28.8	29.5	31.6	27.2	20.7	
St Neots 3	28.4	25	24.1	18	13	11.3	14.1	14.7	13.1	24.3	27.4	23.8	19.8	15.0	
St Neots 4	26.4	22.1	18.5	16.7	11.3	9.2	12.9	13.3	15.5	19.7	29.3	24.2	18.3	13.9	
St Neots 5	47.6	40.8	44.1	36.4	30.8	28.2	36.8	32.3	37.7	33	37.9	47.7	37.8	28.7	
St Neots 6	46.2	36.3	46.7	41.2	31.9	27.1	36.2	35.5	29.7	41	36.8	39.2	37.3	28.4	
St Neots 7	34.2	26.8	27.7	21.3	14.5	13.2	16.4	17.5	18.4	26.6	28.2	30.6	23.0	17.4	
St Neots 8	32.1	29.7	28.1	22	15.3	13	19.1	21.8	26.3	28.3	33.8	27.7	24.8	18.8	
St Neots 9	40.7	33.9	31.7	23.9	20.9	17.8	25.9	24.2	28.4	33.9	31.8	40	29.4	22.4	
Southoe 1	26.7	26.8	27.2	23.8	18	15.9	17	13.5	12.4	22.9	29.7	21.1	21.3	16.2	
Buckden 1	33.5	32.3	31	34.8	28.1	26.7	26.4	20	21.8	27	37.1	26.7	28.8	21.9	
Buckden 2	32	29.7	23.7	22.6	19.1	18.1	26.1	29	31.3	27.2	24.1	28.3	25.9	19.7	
Buckden 3	41.6	36.8	34.8	33.2	32.4	24.1	30.2	29.9	32.3	32.1	35.3	38	33.4	25.4	
Buckden 4	27.9	25	24	21.3	15.2	12.6	15.3	16.3	18.1	24.4	25.3	24.5	20.8	15.8	
Brampton 1	24	20.3	22.3	16.3	10.5	9.6	11.5	13.4	15.2	18.3	25.8	20.4	17.3	13.1	

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Brampton 2	31	28.5	19.2	17.9	11	9.3	13.4	14.1	17.9	21.2	33.6	23.3	20.0	15.2	
Brampton 3	33.5	26.1	34.2	26.6	28.1	26.2	23.1	18.9	20.7	30.8	31.8	31	27.6	21.0	
Brampton 4	28.3	31.3	27.4	19.1	16.8	15.1	13.1	16.6	18.7	24.8	20.5	25.2	21.4	16.3	
Brampton 5	22.9	23.7	22.7	17.3	10.8	9.3	12.5	13.4	14.1	20	25.4	20.2	17.7	13.4	
Catworth 1	24.7	20.1	25.2	24.8	12.8	11.6	17.2	22.1	23.5	22.8	23.5	21.1	20.8	15.8	
PFH 1	56.4	54.3	60.7	52.3	59.7	49	62	53.3	49.8	47.7	49.8	49	53.7	40.8	37.3
PFH 2	56.9	58.1	56.4	50.5	59.3	52.6	61.7	52	48.1	56.7	50.6	50.6	54.5	41.4	37.8
PFH 3	56.9	50.8	63.6	52.1	58.2	51.1	66.7	52.6	49.6	52.7	78.7	50.4	57.0	43.3	39.4
Huntingdon 1	26.5	30.7	26.2	22.1	24.1	18.6	17.1	15.9	17.6	22	25.7	22	22.4	17.0	
Huntingdon 2	39.4	35.6	35.6	31.4	26.6	26.1	27.3	24.9	29.6	31.8	32.3	30.1	30.9	23.5	
Huntingdon 3	35.6	40.2	55.5	49.9	35.7	28.8	48.7	45.1	47.8	43.5	61.1	45.5	44.8	34.0	
Huntingdon 4	47.8	41.5	33.1	35	30.2	24.9	34.2	31.7	33.9	41.2	39.9	38.6	36.0	27.4	
Huntingdon 5	43.5	36.1	37.5	31.4	21.7	19.3	25.9	32.7	33.8	34	33.9	37.9	32.3	24.6	
Huntingdon 6	36.6	26	35.3	27.9	15.9	14	23.8	26.5	29.3	29.1	37.8	39.6	28.5	21.6	
Godmanchester 1	29	38.7	32.2	29.3	35.3	30.2	22.9	18.9	19.4	32.3	28.5	31.5	29.0	22.1	
Wood Green Animal Shelter	26.1	16.9	19	14	9.9	7.2	11.2	10.5	15.8	21.1	24.9	23.7	16.7	12.7	
Fenstanton 1	47.1	35.4	39.2	37.7	23.6	20.3	31.7	18.2	34	37.6	33.6	36.9	32.9	25.0	
Fenstanton 2	33.6	28.1	32.1	25.4	17.7	13.1	21.5		24.6	27.5	24.5	24.3	24.8	18.8	
Fenstanton 3	20.8	22.4	20.2	16.1	10.4	9	10.1	13.3	14.7	20.7	20.3	17.1	16.3	12.4	
St Ives 1	31.2	23.6	28.2	19.5	12	9.5	15	17	18.4	26.1	28.5	28.5	21.5	16.3	
St Ives 2	30.6	29.2	31.2	22.8	18.6	14.8	19.8	24.1	27.2	28.9	24.8	33.5	25.5	19.3	
St Ives 3	28.5	23.9	29.6	23.3	10.4	9.4	14.8	16.3	17.6	23.2	26.5	27.9	21.0	15.9	
Ramsey 1	28.5	28.7	27.5	22.5	17.1	13.7	18.7	17.3	16	24	29.5	27.9	22.6	17.2	
Yaxley 1	39.9	42.2	37.7	34.1	31.3	25.7	36.5	35.6	33.9	44.6	41.7	35.5	36.6	27.8	
Stibbington 1	36	29.3	33.9	35.3	19	15.3	31.9	31.8	26.9	31.9	31.5	37.9	30.1	22.8	
Alwalton 1	25.7	26.1	29.7	22.2	23.9	17.3	24.3	25.7	24.5	27.6	27	29.8	25.3	19.2	

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Sawtry 1	29.7	32.4	34.7	24.6	21.6	17	19.6	37.8	17.1	29.9	30	25.9	26.7	20.3	
Alconbury 1	27.1	33.4	30.4	25	20.6	16.2	20	18.3	19.5	29.6	33.4	26.5	25.0	19.0	
Great Stukeley 1	31.4	25.2	25.6	16.8	11.2	10	18.7	19.7	22.2	23.9	26.1	28.8	21.6	16.4	
Huntingdon 7	28.1	22.1	47.1	42.3	37.6	33.5	46.4	41.6	46.5	49	46.4	43.6	40.4	30.7	
Huntingdon 8	21.1	17	31.8	28.3	22.3	20.9	29.4	27.5	25.2	29.5	36.2	34.4	27.0	20.5	
Hilton 1	11.2	8.5	17	14.5	11.1	9.5	11.2	11.3	14.8	19	22.5	20.6	14.3	10.8	
Fenstnton 4	20.3	13.6	30.1	28.9	19	16.3	24.5	23.5	27.1	30.6	36.9	32.1	25.2	19.2	
Alconbury 2	11.4	9.7	17.1	18		9.6	13.7	13	14.3	18	17.3	19.7	14.7	11.2	
Brampton 6	15.5	19.1	34.2		25.8	24.9	25.5	22.6	26.1	36.6	34.3	35.5	27.3	20.7	
Brampton 7	14.1	9.9	24.1	10.1	11.3	10	10.4	11.4	13.3	19.5	26.1	22.6	15.2	11.6	
Offord D'Arcy 1	11.7	10.6	19.3	6	8.6	9.5	10.3	12.4	16.5	22.1	22.1	20.4	14.1	10.7	
Offord Cluny 2	16.1	15.6	25.5	11	19.6	17	21.2	20.3	24.3	29.7	27	25	21.0	16.0	

☐ Local bias adjustment factor used

☒ National bias adjustment factor used

☐ Annualisation has been conducted where data capture is <75% - N/A

☒ Where applicable, data has been distance corrected for relevant exposure

Notes:

Exceedances of the NO₂ annual mean objective of 40µg/m³ are shown in **bold**.

NO₂ annual means exceeding 60µg/m³, indicating a potential exceedance of the NO₂ 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 Tubes:

The samples have been analysed in accordance with SOCOTEC's standard operating procedure ANU/SOP/1015. This method meets the guidelines set out in DEFRA's *'Diffusion Tubes For Ambient NO₂ Monitoring: Practical Guidance.'*

The tubes were prepared by spiking acetone:triethanolamine (50:50) onto the grids prior to the tubes being assembled. The tubes were desorbed with distilled water and the extract analysed using a segmented flow autoanalyser with ultraviolet detection.

As set out in the practical guidance, the results were initially calculated assuming an ambient temperature of 11°C, the reported values have been adjusted to 20°C to allow for direct comparison with EU limits.

The analysis of diffusion tube samples to determine the amount of nitrogen dioxide present on the tube is within the scope of SOCOTEC's UKAS schedule. In the AIR PT intercomparison scheme for comparing spiked Nitrogen Dioxide diffusion tubes, SOCOTEC currently holds the highest rank of a Satisfactory laboratory.

Diffusion Tube Bias Adjustment Factor:

Diffusion tube values have been multiplied by a bias correction factor of 0.76 gained from the DEFRA LAQM Helpdesk national bias adjustment database (version 03/19 available at <https://laqm.defra.gov.uk/bias-adjustment-factors/national-bias.html>) and shown in figure C.1 below.

The national adjustment figure was utilised due to increased uncertainty in figures obtained by Huntingdonshire District Council's NO₂ monitor.


Figure C.1: Diffusion Tube Bias Adjustment:

National Diffusion Tube Bias Adjustment Factor Spreadsheet						Spreadsheet Version Number: 03/19				
<p>Follow the steps below in the correct order to show the results of relevant co-location studies</p> <p>Data only apply to tubes exposed monthly and are not suitable for correcting individual short-term monitoring periods</p> <p>Whenever presenting adjusted data, you should state the adjustment factor used and the version of the spreadsheet</p> <p>This spreadsheet will be updated every few months; the factors may therefore be subject to change. This should not discourage their immediate use.</p> <p>The LAQM Helpdesk is operated on behalf of Defra and the Devolved Administrations by Bureau Veritas, in conjunction with contract partners AECOM and the National Physical Laboratory.</p>						<p>This spreadsheet will be updated at the end of June 2019</p> <p>LAQM Technical Guidance</p>				
<p>Spreadsheet maintained by the National Physical Laboratory. Original compiled by Air Quality Consultants Ltd.</p>										
Step 1:		Step 2:		Step 3:		Step 4:				
<p>Select the Laboratory that Analyses Your Tubes from the Drop-Down List</p> <p>If laboratory is not chosen, we have no data for this laboratory.</p>		<p>Select a Preparation Method from the Drop-Down List</p> <p>If preparation method is not chosen, we have no data for this method at this laboratory.</p>		<p>Select a Year from the Drop-Down List</p> <p>If a year is not chosen, we have no data</p>		<p>Where there is only one study for a chosen combination, you should use the adjustment factor shown with caution. Where there is more than one study, use the overall factor shown in blue at the foot of the final column.</p> <p>If you have your own co-location study then see footnote⁴. If uncertain what to do then contact the Local Air Quality Management Helpdesk at LAQMHelpdesk@uk.bureauveritas.com or 0800 0327953</p>				
Analysed By ¹	Method ²	Year ³	Site Type	Local Authority	Length of Study (months)	Diffusion Tube Mean Conc. (Dm) ($\mu\text{g}/\text{m}^3$)	Automatic Monitor Mean Conc. (Cm) ($\mu\text{g}/\text{m}^3$)	Bias (B)	Tube Precision ⁴	Bias Adjustment Factor (A) (Cm/Dm)
SOCOTEC Didcot	50% TEA in acetone	2018	R	Cambridge City Council	12	42	30	40.2%	G	0.71
SOCOTEC Didcot	50% TEA in acetone	2018	R	Cambridge City Council	11	38	28	35.8%	G	0.74
SOCOTEC Didcot	50% TEA in acetone	2018	UB	Canterbury City Council	12	16	12	36.3%	G	0.73
SOCOTEC Didcot	50% TEA in acetone	2018	R	Hambleton District Council	12	21	18	20.8%	G	0.83
SOCOTEC Didcot	50% TEA in acetone	2018	R	Ipswich Borough Council	12	34	23	17.3%	G	0.85
SOCOTEC Didcot	50% TEA in acetone	2018	R	City of York Council	12	41	27	54.2%	G	0.65
SOCOTEC Didcot	50% TEA in acetone	2018	UB	City of York Council	11	22	15	52.0%	G	0.66
SOCOTEC Didcot	50% TEA in acetone	2018	R	City of York Council	12	34	26	30.8%	G	0.76
SOCOTEC Didcot	50% TEA in acetone	2018	R	City of York Council	11	30	23	32.3%	G	0.75
SOCOTEC Didcot	50% TEA in acetone	2018	R	Dumfries and Galloway Council	12	36	30	19.8%	G	0.83
SOCOTEC Didcot	50% TEA in acetone	2018	R	Knowsley MBC	12	47	38	26.5%	G	0.79
SOCOTEC Didcot	50% TEA in acetone	2018	R	Suffolk Coastal DC	11	44	33	32.4%	G	0.76
SOCOTEC Didcot	50% TEA in acetone	2018	R	Thames District Council	10	26	21	25.4%	G	0.80
SOCOTEC Didcot	50% TEA in acetone	2018	R	Horsham District Council	11	33	23	42.2%	G	0.70
SOCOTEC Didcot	50% TEA in acetone	2018	R	Horsham District Council	12	33	23	17.2%	G	0.85
SOCOTEC Didcot	50% TEA in acetone	2018	R	Horsham District Council	12	30	26	16.1%	G	0.86
SOCOTEC Didcot	50% TEA in acetone	2018	UB	Slough Borough Council	10	38	31	25.6%	G	0.80
SOCOTEC Didcot	50% TEA in acetone	2018	SU	Slough Borough Council	11	32	22	46.7%	G	0.68
SOCOTEC Didcot	50% TEA in acetone	2018	R	Slough Borough Council	11	33	32	22.5%	G	0.82
SOCOTEC Didcot	50% TEA in acetone	2018	R	Vale of Glamorgan	12	33	25	57.8%	G	0.63
SOCOTEC Didcot	50% TEA in acetone	2018	KS	Marylebone Road Intercomparison	9	95	87	3.1%	G	0.92
Overall Factor ⁵ (21 studies)							Use		0.76	

Distance Correction:

Distance correction has been completed in accordance with the guidance within LAQM Technical Guidance 2016 (TG16). The LAQM NO₂ fall off with distance calculator was utilised, for the appropriate measurement locations, as the following figures demonstrate. (Please note no sites fell within 10% of the objective value so no further distance calculations were required).

Figure C.2: Multiple Distance Correction Calculation:

 <p>Enter data into the pink cells</p>						
Site Name/ID	Distance (m)		O ₂ Annual Mean Concentration ($\mu\text{g}/\text{m}^3$)			Comment
	Monitoring Site to Kerb	Receptor to Kerb	Background	Monitored at Site	Predicted at Receptor	
PFH1	6.0	10.0	18.9	40.8	37.3	Predicted concentration at Receptor within 10% the AQS objective.
PFH2	6.0	10.0	18.9	41.4	37.8	Predicted concentration at Receptor within 10% the AQS objective.
PFH3	6.0	10.0	18.9	43.3	39.4	Predicted concentration at Receptor within 10% the AQS objective.

Automatic Monitoring:

As discussed above, the analysers experienced significant downtime in 2018, initially due to an issue with the air conditioning unit, during which time they had to be switched off to minimise further damage, however, once rectified the monitors themselves stopped operating correctly. The units have now been replaced (completed in April 2019). During 2018 a Service Contract was held with Air Monitors and Quality Assurance/Quality Control audits were completed by Ricardo, again under contract.

Annualisation:

Ricardo currently undertake data management for Huntingdonshire District Council and due to the low data capture from the PM_{2.5} analyser, completed an annualisation calculation in line with government guidelines to gain an annual mean for PM_{2.5}. It should be noted that one AURN site was slightly outside the 50 miles radius suggested (at 57 miles) due to the availability of local PM_{2.5} background sites. This increased the ratio slightly and therefore would be a more conservative approach. Full data was supplied, but as this was a years' worth of hourly measurements this has not been included within this report. If you wish to see the data please contact claire.braybrook@huntingdonshire.gov.uk

No data was available from the PM₁₀ monitor and sufficient data was collected from the NO_x monitor so no annualisation was required for these.

Figure C.3: Annualisation information for PM_{2.5}:

Background Site	Annual Mean	Period Mean	Ratio
Northampton Spring Park	10.995273	10.7659073	1.021305
Leamington Spa	9.80204452	9.23150039	1.061804
Leicester Uni	10.4235836	10.2714847	1.014808
Average Ratio			1.032639

Site	Period Mean	Annual Mean
Corrected site	11.2934407	11.6620464

Data Capture	Type	Network	Distance
96.6	Urban Background	AURN	31.5 miles
94.36	Urban Background	AURN	57 miles
97.92	Urban Background	AURN	44.8 miles

Figure C.4: Third Party QA/QC Reports:

E-mail dated 11th April 2018:

Hi Claire

As discussed onsite here is a summary of yesterday's Huntingdon Pathfinder House QA/QC audit results. Please note these results remain provisional and are subject to further quality control checks.

As discussed the vegetation around the inlets could do with a trim and ideally should be kept at least 1m away and preferable more. The less vegetation there is around the inlet the better really. If you could see what would be acceptable to prune away that would be good.

The air-con was off on arrival and it was warm in the cabin – I turned the aircon on and it seems to be functioning fine following the recent service.

NO_x

On arrival there was a cooler temp high alarm – I wonder whether it was linked to the aircon being off as it cleared during the audit. Probably worth just keeping an eye on to see if it returns.

As discussed I am convinced that the current calibration system setup is causing the oxidation of the site NO cylinder. The system as it is currently installed runs tubing from the regulator to the valve block. A much preferable way is to have the valve system attached to the regulator and I would strongly recommend that this is changed by Air Monitors subject to an acceptable quote etc. The cylinder tested yesterday (114095C) was quite new and the re-calculation test showed a drift from the stated values of Nox 1.2% / NO -6.8% (must be within +-10%). This indicates the current site cylinder has already started oxidising and within another few months I would predict it will be greater than the +-10% limit. I understand that you have a new cylinder to be delivered on 11th April and I would recommend leaving the new cylinder connected but turned off until the site calibration system is upgraded.

Neither the span or zero buttons on the weblogger trigger the valve, so I was unable to test through the site system. I bypassed the switching valve and connected straight into back of analyser to test the site cylinder and zero scrubber. This could be a software issue and needs Air Monitors to advise, or reload the software when it is required to use the weblogger.

NO_x converter test passed at 98.2% at 242ppb of NO₂ (must be within 98-102%), so that appears fine after the service. Linearity test passed. Leak check passed. Flow test passed.

PM10

There appears to be a critical fault with the analyser – the readings were not representative of ambient concentrations and there was no flow measured from the inlet. This requires an immediate callout to Air Monitors. Also the temperature sensor deviated the audit temperature sensor by 5°C (analyser read 5°C and audit temperature measured at 10°C) this will need to be looked at the next service.

PM2.5

Again like the PM10 the temperature sensor deviated the audit temperature sensor by 5°C (analyser read 5°C and audit temperature measured at 10°C) this will need to be looked at the next service. Otherwise the analyser passed all of our tests.

If you have any questions please do not hesitate to ask.

Kind regards

Darren

Darren Lane



Air Quality Consultant

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0401

CERTIFICATE OF CALIBRATION

Ricardo Energy and Environment, Gemini Building, Ferni Avenue Harwell, Didcot,



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Approved Signatories:

- | | |
|--|--|
| <input type="checkbox"/> S. Eaton | <input type="checkbox"/> B Stacey |
| <input type="checkbox"/> D Hector | <input type="checkbox"/> S Stratton |
| <input type="checkbox"/> N Rand | <input type="checkbox"/> S Telfer |
| <input type="checkbox"/> E Marshall-Padkin | <input type="checkbox"/> S Gray |
| <input type="checkbox"/> B Davies | <input checked="" type="checkbox"/> D Lane |

Signed:

Date of issue: 04 Mar 19

Certificate Number: 04397

Customer Name and Address:

Huntingdonshire District Council
Pathfinder House
St Mary's Street
Huntingdon
PE29 3TN

Description:

Calibration factors for the air monitoring station at
Huntingdon Pathfinder House

Ricardo Energy & Environment ID:

ED62657217/January 2019

The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor $k=2$ providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

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Date of issue: 04 Mar 19
 Certificate Number: 04397
 Ricardo Energy & Environment ID: ED62657217/January 2019

Huntingdon Pathfinder House
 Date of audit: 21 Jan 2019

Species	Analyser Serial no	Zero Response ¹	Zero uncertainty ppb	Calibration Factor ²	Factor uncertainty %	Converter eff. (%) ³
NOx	426608503	-3.6	2.5	0.9302	3.5	100.0
NO	426608503	-2.5	2.5	0.9358	3.5	n/a

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Date of issue: 04 Mar 19
 Certificate Number: 04397
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The gaseous ambient analysers listed above have been tested for zero response, calibration factor, linearity and converter efficiency (NOx analysers) by documented methods. The factors have been calculated using certified gas standards. The particulate analysers listed above have been tested for sample flow rates and $k_{0.5}$ (where appropriate) by documented methods. Note that the test results are valid on the day of test only, as analyser drift over time cannot be quantified. All results for gaseous species are given in ppb (parts per billion) mole fractions or ppm (parts per million) mole fractions.

¹ The zero response is the zero reading on the data logging system of the analyser when audit zero gas was introduced to the analysers under test.

² The calibration factor is the multiplying factor required to scale the reading on the data logging system of the analyser into reported concentration units (ppb for NO, NOx, SO₂, O₃ and ppm for CO). Where 1ppm = 1000ppb. It should be used in conjunction with the zero response. A corrected concentration is calculated using the following equation:

Concentration = F(Output - Zero Response)

Where F = Calibration Factor provided on this certificate

Output = Reading on the data logging system of the analyser

Zero Response = Zero Response provided on this certificate

³ Converter eff. is the measured efficiency of the NO₂ to NO converter within the oxides of nitrogen analyser under test.

The calibration results shaded are those that fall within our scope of accreditation, all other results on this certificate are not UKAS accredited, but have been included for completeness.

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Figure C.5: Correspondence from Public Health Directorate re. ASR:

Braybrook, Claire (Env. Health)

From: Green Iain
Sent: 01 July 2019 14:48
To: Braybrook, Claire (Env. Health)
Cc: Robin Liz (CCC); Keeble Stuart
Subject: Huntingdonshire Air Quality ASR - Draft

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Claire

Thank you for consulting Public Health on the draft ASR for 2018-19, there are no major concerns. A few points you could add to reflect and strengthen the local work we are/have been doing on Air Quality in partnership.

- Page 1 exec summary you could reference the Cambridgeshire Transport and Health JSNA – Air Pollution, which further outlines the impacts of poor air quality on health (<http://cambridgeshireinsight.org.uk/wp-content/uploads/2017/08/Transport-and-Health-JSNA-2015-Air-Pollution.pdf>)
- Pages 19-20 Section 2.3, You could also mention the heightened prominence air quality is receiving locally with the Motion to the Cambridgeshire County Council Full Council by Cllr DuPre asking the County Council to work with partners on addressing air quality, the motion was presented at the Full Council meeting on October 2018, text was as follows:

(b) Motion from Councillor Lorna Dupre This council notes: - the risks to public health posed by poor air quality; - the success of Clean Air Day 2018 in increasing awareness of air pollution, with 203 supporter organisations, five campaign partners and thousands of volunteers across the country taking part; and - the involvement of 2000 organisations including hospitals, schools and local authorities in 550 events nationwide on the day. This council welcomes the activities recently undertaken or planned by this authority in conjunction with partner councils and other public bodies to address air pollution more collaboratively, including the development of communication resources, training and learning events, guidance for communities on air quality monitoring, and collaborative working. This council therefore resolves to work with its partner councils and other public bodies towards promoting a programme of active participation across Cambridgeshire in next year's Clean Air Day on Thursday 20 June 2019.

Cambridge City used the following wording in their ASR following the same suggestion, if it helps.

"County Council elected members have noted the impacts of poor air quality and have passed a resolution to work with its partner councils and other public bodies towards promoting a programme of active participation across Cambridgeshire to address air pollution more collaboratively, including the development of communication resources, training and learning events, guidance for communities on air quality monitoring, and collaborative working."

With the suggestions above Public Health are happy to sign off the 2019 Huntingdonshire ASR for the year 2018.

Regards

Iain

For the Draft Review of Air Quality Management Area's Report please see attachment or contact claire.braybrook@huntingdonshire.co.uk directly.

Appendix D: Map(s) of Monitoring Locations and AQMAs

Figure D.1: Map indicating location of Automatic NO₂, PM₁₀ and PM_{2.5} monitor:



Figure D.2: Map showing location of Automatic NO₂, PM₁₀ and PM_{2.5} monitor:

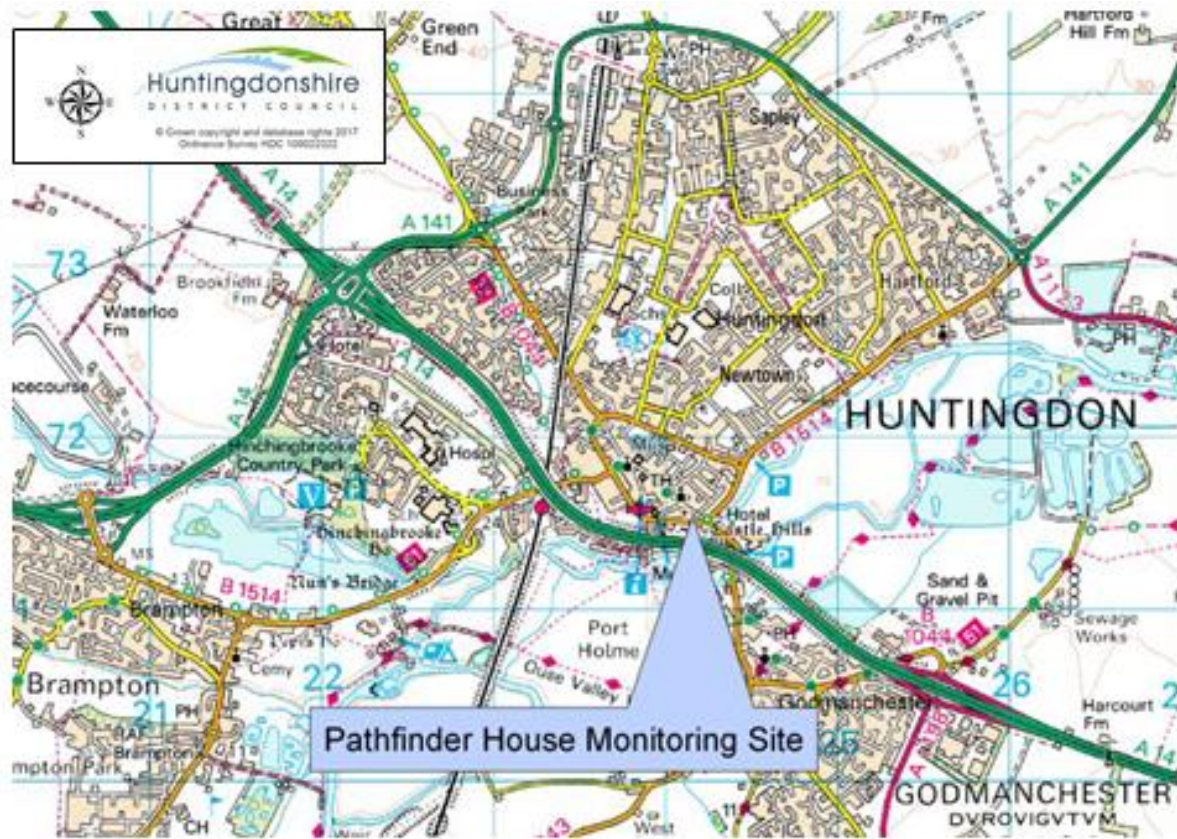


Figure D.3: Close up of location of Automatic NO₂, PM₁₀ and PM_{2.5} monitor:



Please note – The AQMS can be seen in relation to the AQMA, on figure D5 as 'PFH'.

Figure D.4: Map indicating location of non automatic (Diffusion Tube) NO₂ monitoring locations:



Figure D.5: Huntingdon AQMA Diffusion Tube NO₂ monitoring locations:

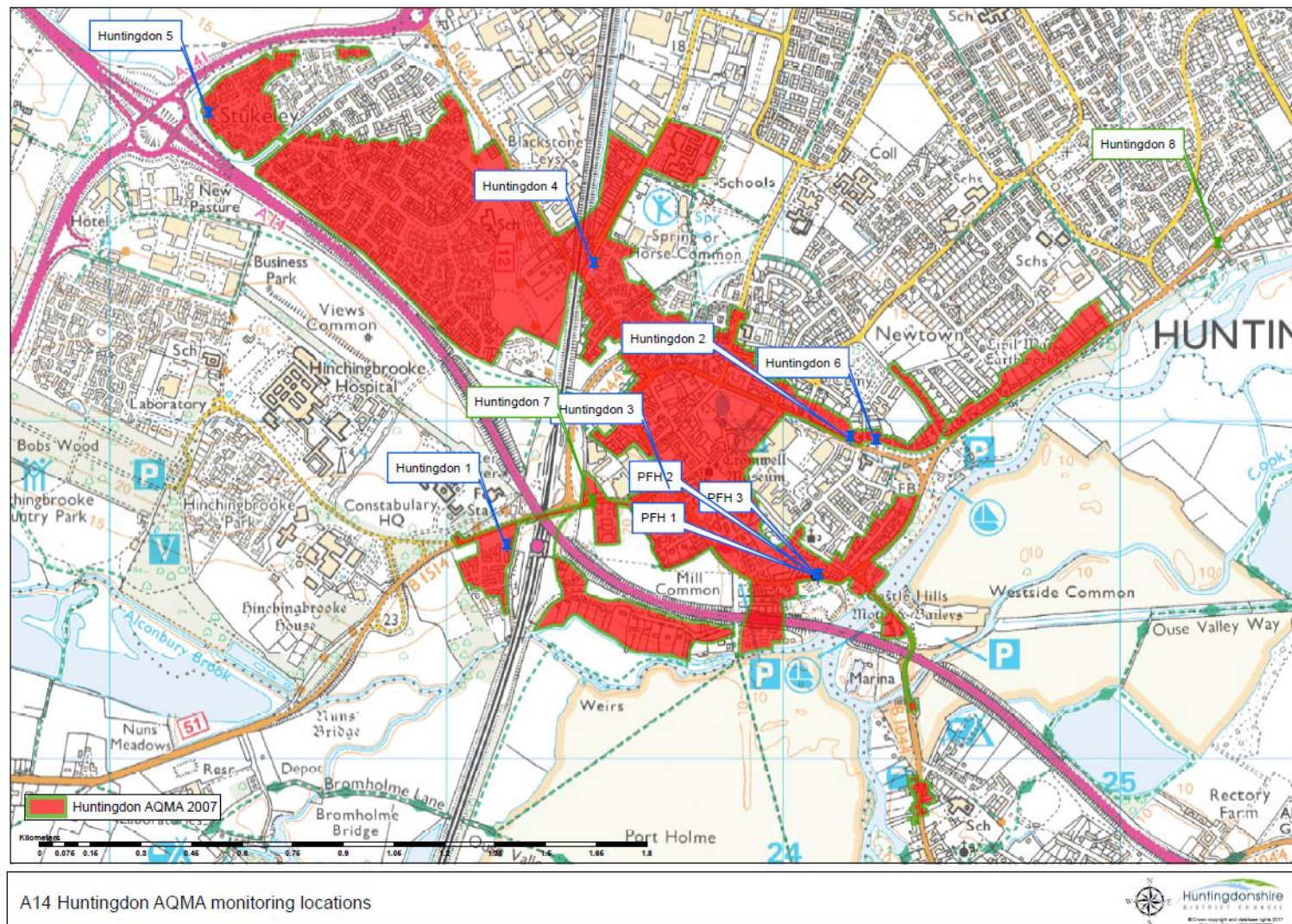


Figure D.6: St Neots AQMA Diffusion Tube NO₂ monitoring locations:

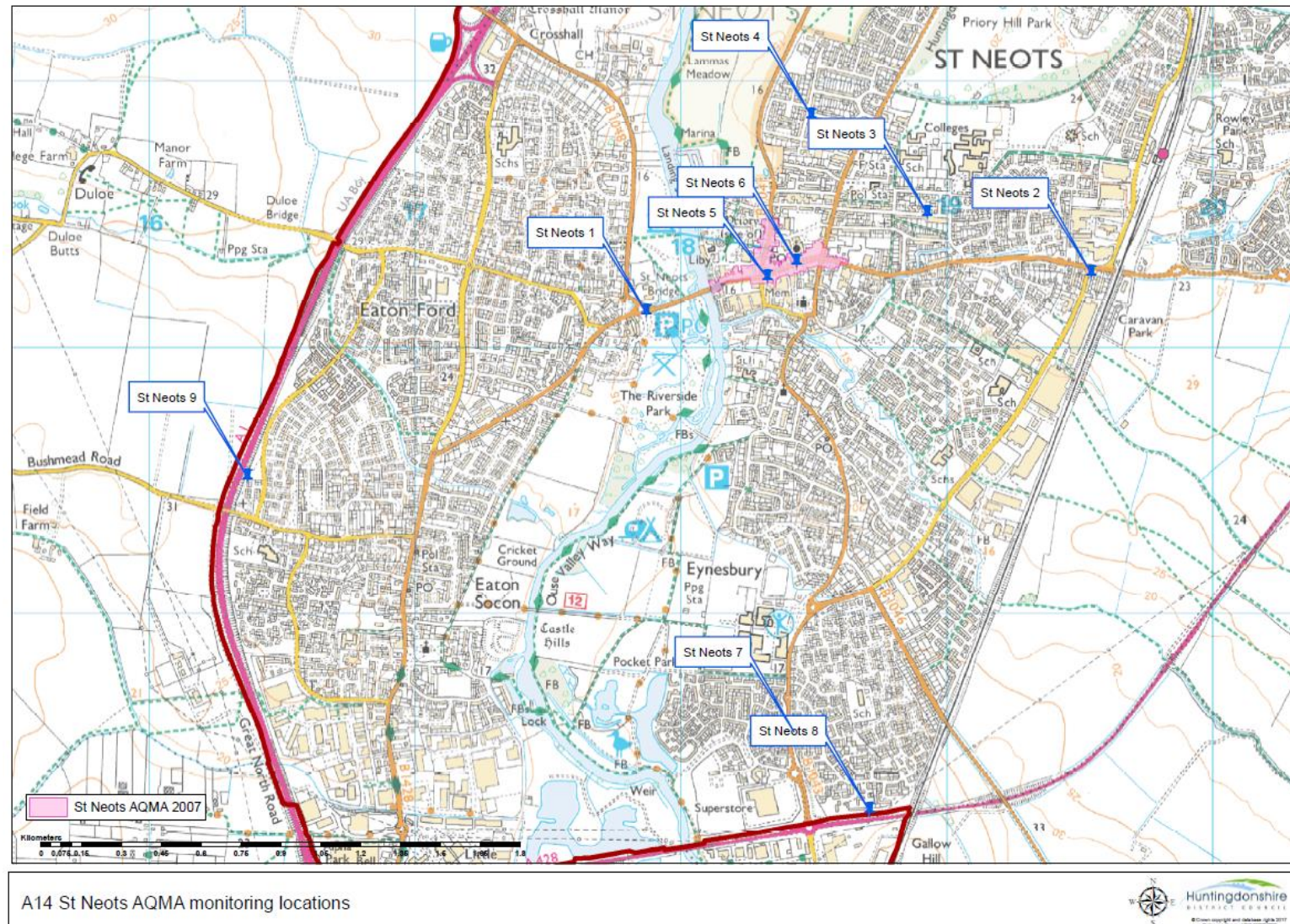


Figure D.7: A14 Fenstanton AQMA Diffusion Tube NO₂ monitoring locations:

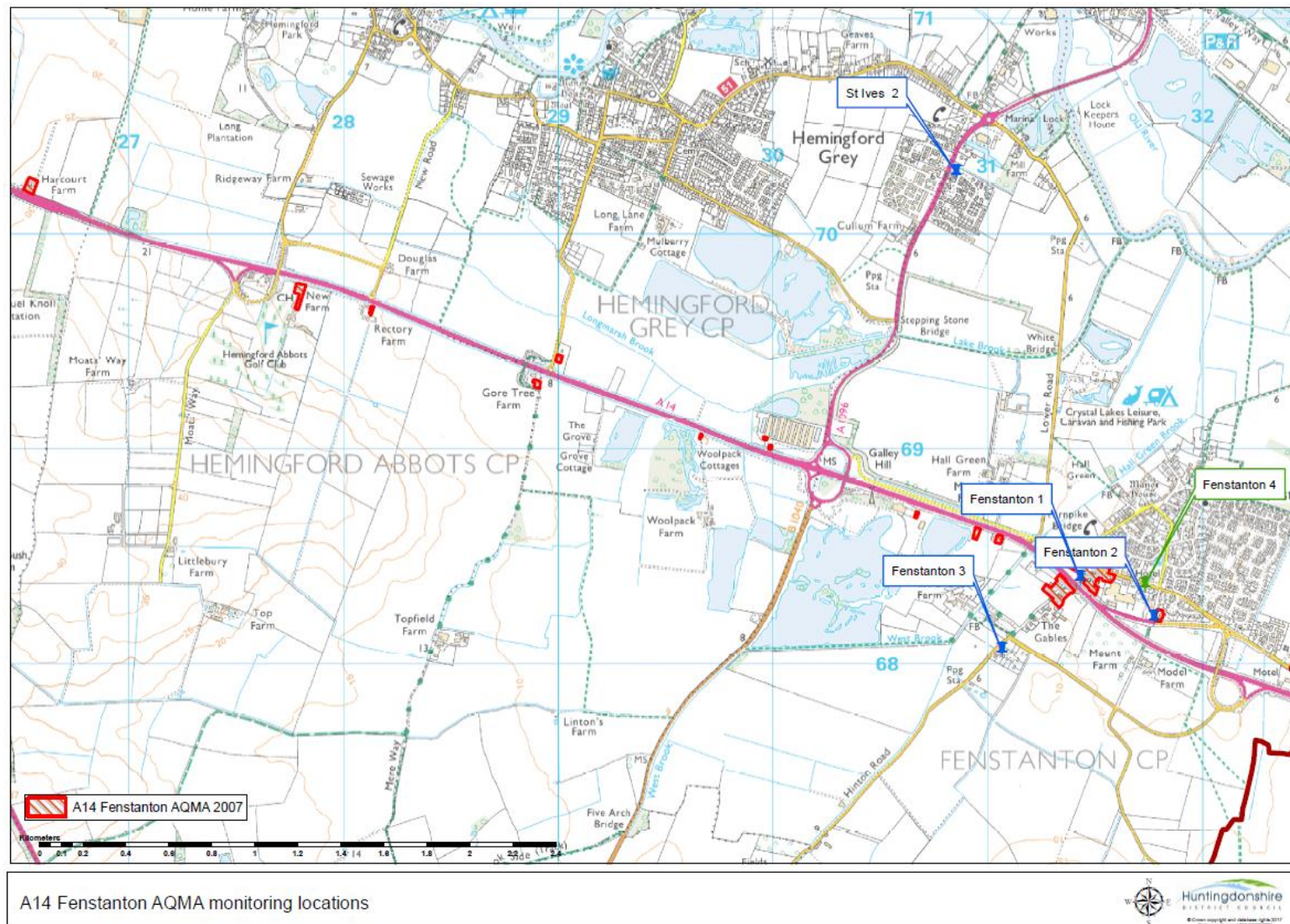
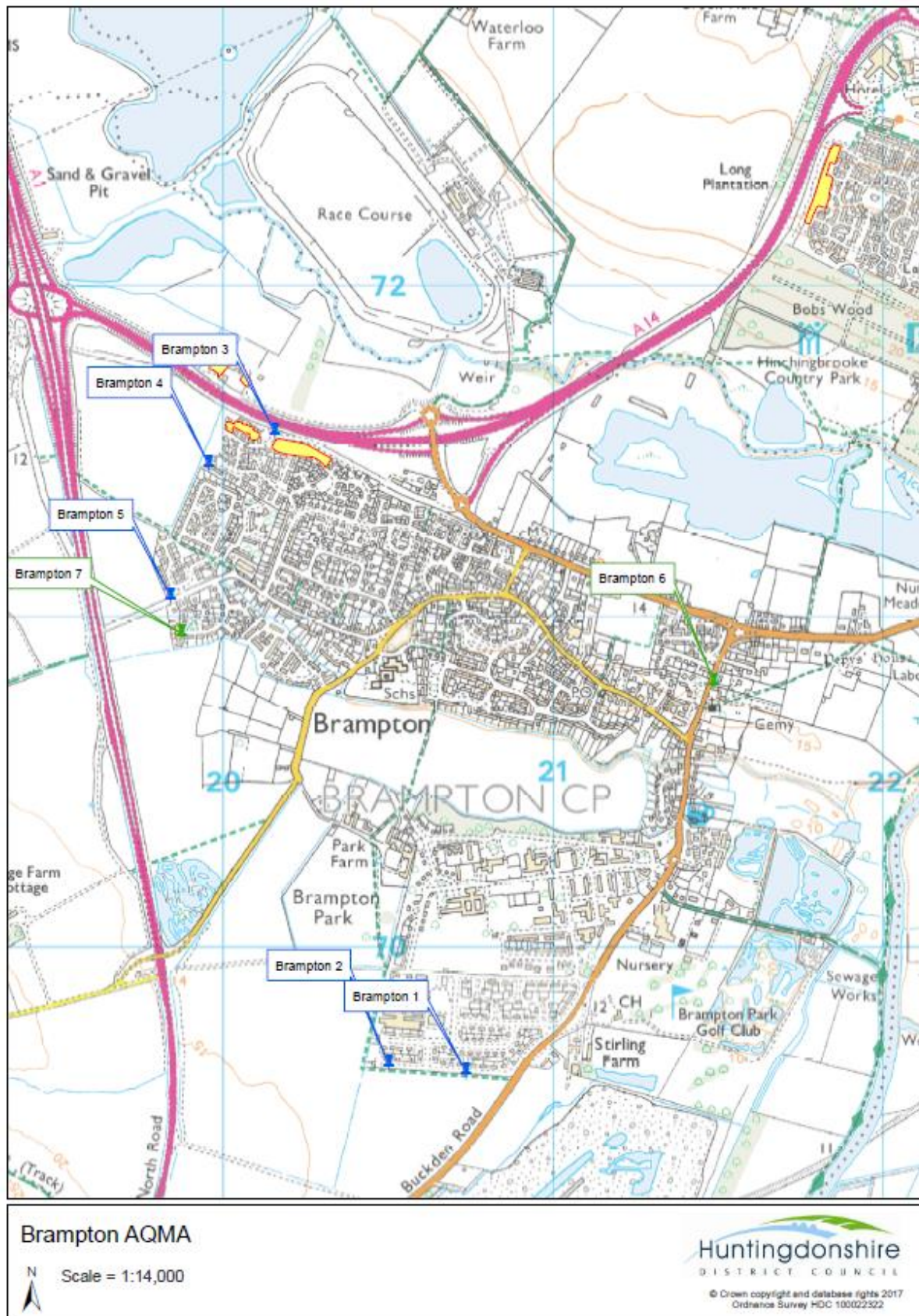


Figure D.8: Brampton AQMA Diffusion Tube NO₂ monitoring locations:



Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England

Pollutant	Air Quality Objective ⁴	
	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

⁴ The units are in microgrammes of pollutant per cubic metre of air (µg/m³).

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
HDC	Huntingdonshire District Council
LAQM	Local Air Quality Management
LPA	Local Planning Authority
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