Forest Heath & St Edmundsbury councils

Forest Heath & St Edmundsbury councils

West Suffolk

working together

2017 Air Quality Annual Status Report (ASR)

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

July 2017

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Executive Summary: Air Quality in Our Area

Why Air Quality Matters

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 most recent indicators for St Edmundsbury and Forest Heath suggest that 5.0% & 4.8% respectively of mortality in persons in the age range 30+years is attributable to poor air quality. This can be compared to the East of England mortality rate of 5.1% for the same period (www.phoutcomes.info/).

Improving the air quality will help to improve the long term health of our local communities, makes our towns more attractive places to visit and therefore improves the local economy.

Improving air quality in West Suffolk will not only help to reduce the impact on human health, but it will also reduce damage to water quality, biodiversity and crops, all of which are important within the area.

Air Quality in West Suffolk

West Suffolk is Forest Heath District Council (FHDC) and St Edmundsbury Borough Council (SEBC) working together. The area is a mix of market towns (Brandon, Bury St Edmunds, Haverhill, Mildenhall and Newmarket) and more rural village communities. The regionally important strategic road links of the A11 and A14 also cross the area.

[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

The main source of pollution in the area is road traffic and this is generally worst in the market towns. We monitor for the pollutant Nitrogen Dioxide, which is considered the main pollutant of concern for road vehicles and is particularly linked to Heavy Goods Vehicles (HGVs) and diesels. Consequently the majority of our monitoring is adjacent to busy roads within our market towns.

Air quality in West Suffolk is generally good and continuing to show long term improvement at monitored locations throughout the area. However, the importance of continuing to improve the local air quality is at a higher profile than ever before.

Each town within the area has its own unique air quality issues and these are summarised below. There is also significant monitoring in the village of Great Barton which is also discussed below:

- **Brandon** continues to show gradual improvement in air quality although the levels of traffic travelling through the town on the A1065 are still a concern to the residents and their representatives. None of the monitor locations failed the national set air quality objectives. Traffic patterns around Brandon have undoubtedly changed since the opening of the new dualled section of the A11 bypassing Elveden, however, we are still awaiting the publication of the Post Opening Project Evaluation (POPE) which Highways England are due to publish. Once the POPE is published we will be able to better assess how to influence the traffic and further improve air quality in Brandon.
- **Bury St Edmunds** is the only town in West Suffolk to show exceedances of the air quality objective for Nitrogen Dioxide. Exceedances were recorded along Sicklesmere Road (A134) to the south of the town and at the roundabout of Kings Road and Parkway close to a large proportion of the town centre car parking.

  It was the second year running that exceedances were recorded on Sicklesmere Road and it is recommended that an Air Quality Management Area (AQMA) is declared here. A long term solution is available for Sicklesmere Road in the form of a relief road associated with the South East Bury strategic growth area; however, we still consider it prudent to declare an AQMA to ensure that procedures are in place should the development be delayed or postponed for any reason.

The monitoring point at the Kings Road / Parkway roundabout is not located on a residential property and pollution levels are calculated to be acceptable at the closest residential property. This location was below the objective in 2015 but wasn't monitored previous to 2015 so the long term trend is unclear. We will continue to monitor this location and may undertake a detailed assessment should pollution levels continue to rise here.

Away from these two locations results varied as to whether they showed an increase or decrease in pollution when compared to 2015.

- **Great Barton** is a village to the north east of Bury St Edmunds with a main road (A143) cutting through it. A row of cottages either side of, and including, the Post Office are situated close to this road. An AQMA was in place between 2009 and 2012 when it was revoked on a technicality. It has recently been re-declared due to a review of our previous decision in light of new guidance together with continued exceedance of the air quality objective. SEBC are currently working on the action plan for this AQMA with the first steering group meeting planned for June 2017. Recorded levels of Nitrogen Dioxide pollution in 2016 were very slightly below the annual mean objective
- **Haverhill** monitoring continues to show compliance with the annual air quality objectives in all locations. The main area of concern is Withersfield Road (A1307) where levels have been close to the objectives in recent years. A north west Haverhill relief road has planning permission linked to a strategic housing site. The relief road must be finished within 5 years of the commencement of the strategic housing development, with the commencement of the strategic housing development anticipated to be this year.
- **Mildenhall** continues to show concentrations of pollutants well within the air quality objective levels and does not currently pose any significant concern.
- **Newmarket** has shown steady air quality improvements since the declaration of an AQMA along the High Street and Old Station Road in 2009 and the AQMA has recently (April 2017) been reduced in size to reflect this improvement. The AQMA has been retained along Old Station Road due to insufficient confidence in the data along this road; however, further monitoring

was added on Old Station Road at the beginning of 2016 and the beginning of 2017 to rectify this data gap. None of the new locations in 2016 showed an exceedance and we will continue to carefully consider the results from 2017. The action plan for Newmarket is in the process of being revised due to the changes to the AQMA.

There remains local concern around idling in the taxi rank on the High Street, where the highest levels of Nitrogen Dioxide in Newmarket are measured. The Environment Team continue to liaise with officers in the Licensing department to ensure improved compliance.

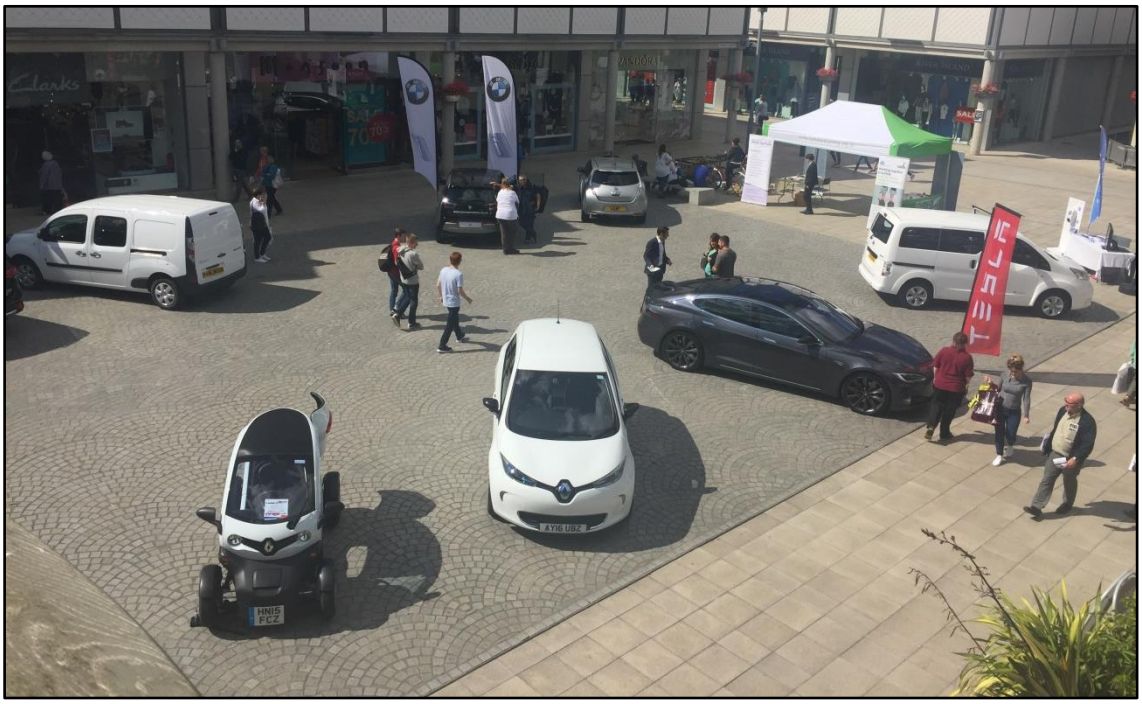
As most of the pollution within West Suffolk originates from road traffic, the West Suffolk councils have to work closely with Suffolk County Council, who is the responsible authority for the maintenance and strategic planning of the local road network. We also work closely with the Local Planning Authority to ensure new developments are appropriately controlled and mitigation is provided where required.

Actions to Improve Air Quality

Zero Emission Vehicles

West Suffolk councils have focused on campaigns to increase the awareness of zero emission electric vehicles throughout 2016, undertaking the following actions:

- **Electric Vehicle Show** – In August 2016 we held an electric vehicle show in the Arc shopping centre in Bury St Edmunds.



The Arc is West Suffolk's most popular shopping centre; with a footfall of approximately 28,000 on the day West Suffolk councils staged the event.

The event showcased the variety of zero emission vehicles, including cars and vans and aimed to changing peoples preconceptions about electric vehicles by providing 'myth busting' literature and engaging with interested locals. Following the success of this event, we anticipate running more in 2017.

- **Charge Point Installation** – We have recently installed new EV charge points in our public car parks in Haverhill and Newmarket and Bury St Edmunds. These will further enable the use of EVs in our area.

- **Charge Points through Planning** – September 2016 saw a change in our responses to major planning applications, with all major applications now being requested to contribute to air quality improvements. All major developments are targeted as there very few developments which will show a direct impact on local air quality, but all developments will have a cumulative affect.

  For major residential developments we request all dwellings with allocated off street parking are provided with EV charging facilities. For communal or non-allocated residential parking we generally require 10% of spaces to be provided with charge points and for commercial developments we request 5% of charge points are allocated for EV charging.

New Infrastructure

In 2016 construction started on the Eastern Relief Road which will help to aid traffic congestion in the east of Bury St Edmunds. This road is due to open in September 2017.

The Sybil Andrews Academy, a new secondary school, was opened in late 2016. The existing secondary schools in Bury St Edmunds are all located to the northwest of the town centre, which resulted in significant cross town rush hour traffic. The new

school is located on the east of Bury St Edmunds and is anticipated to reduce school related cross town traffic.

Air Quality was a material consideration in agreeing a limit to the number of dwellings allowed prior to the completion of the relief road associated with South East Strategic housing site in Bury St Edmunds. The development will be limited to 500 dwellings before the relief road is completed.

Conclusions and Priorities

Air Quality in West Suffolk remains largely good and the number of exceedances of the annual mean objective for Nitrogen Dioxide remains minimal. Action plans are being developed and revised respectively for the two AQMA's in Great Barton and Newmarket. The exceedance recorded on Sicklesmere Road should result in a further AQMA in the next year.

The councils will continue to work to improve the provisions for electric vehicles in West Suffolk in partnership with Suffolk County Council and private companies. The number of charge points in domestic, workplace and public settings is likely to increase significantly over the coming years. Further electric vehicle events are planned for the future.

We will also be working on ways to improve our own fleet of vehicles and continue to offer the West Suffolk Greener Business Grant to companies local to reduce the carbon footprint and emissions of their fleet.

The continued growth in housing in West Suffolk will be the main challenge when tackling air quality in the area. Construction has begun at two of the strategic housing developments in Bury St Edmunds with a third expected to gain planning permission this year. In Haverhill, construction on a strategic housing site could also begin this year. The councils continue to forward plan with masterplan consultations for Western Way, Bury Town Centre and the Mildenhall Hub; continued consultation and development of the Forest Heath Local Plan and concept planning for the possible closure and subsequent redevelopment of the Mildenhall Air Base.

We are committed to continuing to monitor the local air quality throughout West Suffolk and to identifying schemes that can provide potential improvements either at any of our areas of concern or on an area wide basis.

Local Engagement and How to get Involved

As an individual there are many actions that you can take to improve the air quality and reduce air pollution. This will improve the quality of life for everyone, including you and your family. Below are a few suggestions of how to get involved:

- Consider purchasing an electric vehicle; the costs are reducing and the technology and infrastructure are making this technology more practical for more people.
- Use your car less. Try to walk, cycle, and use the bus or train wherever possible. Conventionally fuelled cars are particularly polluting over short journeys, so aim to cut these out first.
- Reduce emissions from your car by ensuring it is regularly serviced and well maintained, ensure you only carry the weight you need, and you drive in a gentle, steady manner.
- When buying a traditional fuel vehicle consider the most fuel efficient petrol vehicle rather than buying a diesel vehicle.
- Encourage your employer, school or college to set up a Green Travel Plan.
- Car share, to reduce emissions and save money. See the Suffolk Car Share website for further details: www.SuffolkCarShare.com

There are no specific air quality campaign groups within West Suffolk, however, a number of local community groups have shown an interest in assisting to improve air quality in their areas and we are working closely with Newmarket Town Council and Newmarket BID. We have also had community groups highlight areas where they believe that air quality might be an issue and we are always willing to consider monitoring new areas if we agree that pollution may be a problem.

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1 Local Air Quality Management

This report provides an overview of air quality in West Suffolk (Forest Heath District Council and St Edmundsbury Borough Council working together) during 2016. 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 West Suffolk 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 AQMAs declared by Forest Heath District Council and St Edmundsbury Borough 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=105 (Forest Heath)
- https://uk-air.defra.gov.uk/aqma/local-authorities?la_id=255 (St Edmundsbury)

Alternatively, see Appendix B, which provides maps of air quality monitoring locations and the AQMAs.

St Edmundsbury Borough Council proposes to declare a new AQMA in Bury St Edmunds, on the A134 Sicklesmere Road to the south of the town (see monitoring section).

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 (inc. date of publication)
						At Declaration	Now	
Newmarket AQMA	Declared 6th April 2009 Amended 18th April 2017	Nitrogen Dioxide Annual Mean Objective	Newmarket	An area incorporating Old Station Road from the Clock Tower roundabout to the Junction with Rous Road, Newmarket Suffolk.	NO	40.0µg/m^3 (2009 – Not at relevant location for annual mean objective)	32.8 µg/m^3 (2016)	Action Plan currently being revised due to significant amendment to AQMA in April of this year (2017).
Great Barton	Declared 11th May 2011 Revoked 1st January 2013 Declared 18th April 2017	Nitrogen Dioxide Annual Mean Objective	Great Barton	An area incorporating Gatehouse Cottage and 1to 8 The Street (A143), in the Parish of Great Barton.	NO	48.2µg/m^3 (2011)	37.9µg/m^3 (2016)	Action Plan currently being developed due to re-declaration of this year (2017).

☒ **West Suffolk 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 West Suffolk

Defra's appraisal of last year's ASR for St Edmundsbury Borough Council concluded that the council should progress the declaration of the AQMA at the Post office (in Great Barton, which has been actioned) and ensure they declare the AQMA in Sicklesmere Road if the modelling and diffusion tube results show that there will be an exceedance. Although the AQMA has not yet been declared, the recommendation to do so is made within this report following sufficient data collection.

Defra's appraisal of last year's ASR for Forest Heath District Council concluded that the council should progress the amendment of the AQMA in Newmarket and submit their amendment to DEFRA. This has been completed.

West Suffolk councils have taken forward a number of direct measures during the current reporting year of 2016 in pursuit of improving local air quality. Wider infrastructure projects that will also have a positive impact on Air Quality have also been undertaken. 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 Plans which are currently being updated, as explained in Table 2.1 above and will be published separately in due course. Specific measures to address the AQMA in Great Barton are not included here as the measures to be considered are still in early development. Key completed measures are:

- Promotion of zero emission Electric Vehicles at an Electric Vehicle showcase in the centre of Bury St Edmunds
- Installation of new Electric Vehicle charge points in public carparks in Bury St Edmunds, Haverhill and Newmarket.
- Changes to planning application response policy to ensure new developments are fitted with Electric Vehicle charge points to encourage and facilitate their use.
- Improved car park signage in Newmarket to avoid repeat journeys along the High Street.

- Opening of the new secondary school (Sybil Andrews Academy) on the eastern side of Bury St Edmunds which is anticipated to reduce cross town traffic and therefore reduce recorded levels of pollution in the town.

West Suffolk councils expects the following measures to be completed over the course of the next reporting year:

- Continued promotion of Electric Vehicles through further showcase events.
- Investigate further installation of Electric Vehicle charge points, specifically the installation of a rapid charger in Newmarket.
- Opening of the Eastern Relief Road to relieve congestion and consequently improve air quality on the eastern side of Bury St Edmunds.

The principal challenges and barriers to implementation that West Suffolk councils anticipates facing are the continued rapid housing growth in the area with construction having started at two of the strategic growth sites in Bury St Edmunds.

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	Electric Vehicle Charging Points through Planning	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	SEBC and FHDC	2016	2016 to ongoing	% of planning applications with conditions successfully applied	Increase uptake of zero emission vehicles	Implemented and conditions being successfully imposed	Ongoing	
2	Electric Vehicle Charging Infrastructure on council owned land	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	SEBC and FHDC Funding: Highways England providing funding for Rapid chargers on strategic network	Ongoing	2017 / 2018	Number of additional charge points installed	Increase uptake of zero emission vehicles	Fast chargers installed in Bury St Edmunds, Haverhill and Newmarket	2018	Funding and electricity supply.
3	Electric Vehicle Showcase	Promoting Low Emission Transport	Other	SEBC and FHDC Environmental Health	2016	2016 to ongoing	Increased uptake in electric vehicles	Increase uptake of zero emission vehicles	Showcase undertaken in 2016	Ongoing	2017 event being planned
4	Greener Business Grant - Promote £1,000 West Suffolk Greener Business Grant to be used for businesses to move to ULEV	Promoting Low Emission Transport	Company Vehicle Procurement - Prioritising uptake of low emission vehicles	SEBC and FHDC Environmental Health	2016	2016 to ongoing	Increased uptake in electric vehicles	Increase uptake of zero emission vehicles	Awaiting first successful applicant	Ongoing	

Table 2.3 – Progress on Measures to Improve Air Quality (Contd…)

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
5	Eastern Relief Road	Traffic Management	Strategic highway improvements, Re-prioritising road space away from cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	SEBC and Suffolk County Council	Completed	2016 / 2017	Road completed	Reduction in congestion	Road currently under construction	Sep-17	
6	New High School	Traffic Management	Other	SEBC and Suffolk County Council	Completed	Completed	Reduced cross town travel during school drop-off and collection times	Reduction in congestion	Completed	Completed	
7	Council Fleet Improvements	Vehicle Fleet Efficiency	Fleet efficiency and recognition schemes	SEBC and FHDC	Ongoing	Ongoing	Council vehicle emissions	Reduced vehicle Emissions	Ongoing	2019	
8	Eco driving courses for council staff	Vehicle Fleet Efficiency	Driver training and ECO driving aids	SEBC and FHDC	Completed	Ongoing	Number of staff completing course	Reduced vehicle Emissions	Ongoing	Ongoing	

Table 2.4 – Progress on Measures to Improve Air Quality (Contd…)

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
9	South East Bury St Edmunds relief road	Traffic Management	Strategic highway improvements, Re-prioritising road space away from cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	SEBC / Suffolk County Council and Developer	Ongoing	2022	Measured concentration in Nitrogen Dioxide on Sicklesmere Road	TBC closer to opening date	Awaiting planning permission to be granted	2022	Completion of road prior to 400 dwellings completed to be a condition of the planning approval
10	Haverhill north west relief road	Traffic Management	Strategic highway improvements, Re-prioritising road space away from cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	SEBC / Suffolk County Council and Developer	Ongoing	2022	Measured concentration in Nitrogen Dioxide on Withersfield Road	TBC closer to opening date	Awaiting start of development	2022	Condition of planning requires completion within 5 years of commencement of development

Table 2.5 – Progress on Measures to Improve Air Quality (Contd…)

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
11	Dualling of the A11	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	Completed	Completed 2014	Measured concentration in Nitrogen Dioxide in Elveden and Brandon	75% reduction in NO2 in Elveden	Reduction in NO2 proven in Elveden. Monitoring in Brandon ongoing	2014	No significant reduction in NO2 recorded in Brandon. Awaiting Highways England POPE report.
12	Improved Car Parking signage in Newmarket	Traffic Management	UTC, Congestion management, traffic reduction	Suffolk County Council	Completed	Completed	Reduction in NO2 in Newmarket High Street	% reduction in NO2 levels	Implemented	Sep-16	Likely reduction in NO2 too small to be noted in monitoring results
13	Air Quality Awareness campaign in Newmarket	Public Information	Via other mechanisms	FHDC	Ongoing	Ongoing	Reduction in NO2 in Newmarket High Street	% reduction in NO2 levels	Meetings held with Newmarket Town Council and Newmarket BID	Autumn 2017	
14	Newmarket High Street Design Brief	Policy Guidance and Development Control	Other policy	FHDC	Ongoing	Ongoing	Improvements to Newmarket High Street	Smoother driving through High Street	Air Quality Officer involved in early design brief meetings	2018	Design brief for Newmarket High Street which will influence the way forward for the town centre and will influence which additional measures can be developed

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.

West Suffolk councils are taking the following measures to address $PM_{2.5}$:

We do not have the facility to measure $PM_{2.5}$, but given the relatively low recorded levels of Nitrogen Dioxide and DEFRA modelled levels of PM_{10} we do not expect $PM_{2.5}$ to be above guideline levels. However we believe that many of the measures listed in Table 2.2, above, would contribute to a reduction in exposure to $PM_{2.5}$, especially the measures promoting the uptake of zero emission vehicles. We will continue to consult with Public Health colleagues and be advised by them, and national guidance, on any relevant measures that will reduce exposure.

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

3.1 Summary of Monitoring Undertaken

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

3.1.1 Automatic Monitoring Sites

West Suffolk did not undertake any automatic (continuous) monitoring during 2016.

3.1.2 Non-Automatic Monitoring Sites

West Suffolk undertook non-automatic (passive) monitoring of NO_2 at 60 sites during 2016. This includes 35 sites in FHDC and 25 sites in SEBC. Table A.1 (FHDC) and A.2 (SEBC) 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” and/or 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 and “annualisation”. Further details on adjustments are provided in Appendix C. Locations have not been routinely distance adjusted in previous year’s reports and for consistency with previous reports values are only distance adjusted where stated. All monitoring locations are distance adjusted in Tables B1 and B2 in Appendix B.

3.2.1 Nitrogen Dioxide (NO_2)

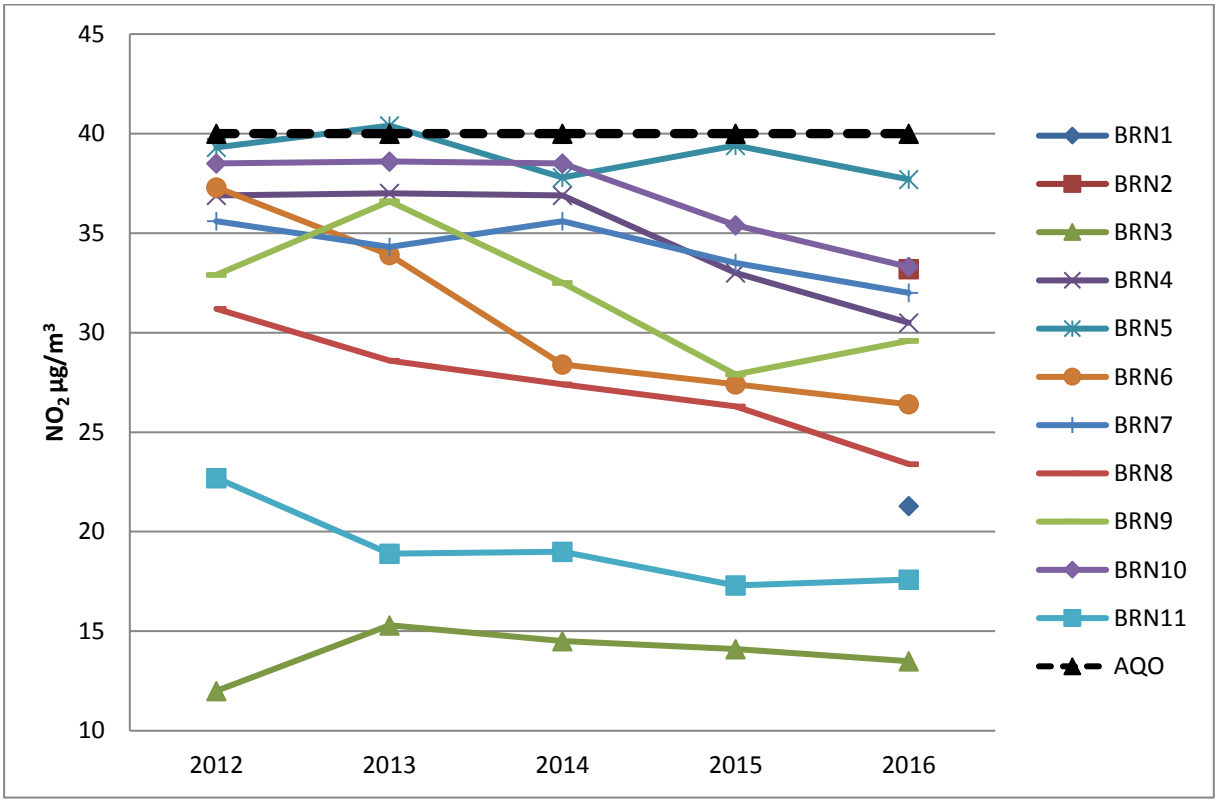
Table A. (FHDC) and Table A4 (SEBC) in Appendix A compares the ratified and adjusted monitored NO_2 annual mean concentrations for the past 5 years with the air quality objective of 40µg/m^3.

For diffusion tubes, the full 2016 dataset of monthly mean values is provided in Table B1 (FHDC) and Table B2 (SEBC) in Appendix B.

Brandon

Brandon continues to show gradual improvement in air quality as can be seen in Figure 1, below. Some sites such as BRN6 (London Rd/Coulson Lane) and BRN8 (Hellesdon House, High Street) have shown a steady decline in pollution levels over the past 5 years whilst at other sites such as BRN4 (London Road/Stores St) and BRN10 ('Boots', High Street) the decline in pollution is more evident over the past two years only. None of the monitoring locations have exceeded the annual mean objective since BRN5 (52 London Road) recorded a very slight exceedance of 40.4µg/m^3 (compared to an objective of 40.0µg/m^3) in 2013. BRN5 remains the highest recorded monitoring location in Brandon at 37.7µg/m^3, with no other monitoring locations being above 34.0µg/m^3. It is therefore not considered necessary to undertake a detailed assessment in Brandon.

Figure 1. Trends in Concentration of Air Pollution in Brandon (not adjusted to façade)



However, we are aware that there the residents of Brandon and their representatives are still concerned by the level of traffic using the A1065 through the town, especially the levels of Heavy Goods Vehicles (HGVs). Residents also have concerns about the air quality given the volume of traffic. Traffic patterns around Brandon have undoubtedly changed since the opening of the new dualled section of the A11

bypassing Elveden, however, there is local perception that this major infrastructure project has not had as significant a positive impact as hoped. We are still awaiting the publication of the Post Opening Project Evaluation (POPE) which Highways England are due to publish on the A11. Once the POPE is published we will be able to better assess how to influence the traffic and further improve air quality in Brandon.

Bury St Edmunds

Bury St Edmunds is the only town in West Suffolk to show exceedances of the annual mean air quality objective for Nitrogen Dioxide. Exceedances were recorded along Sicklesmere Road (A134) to the south of the town (42.1µg/m^3 at 2 Sicklesmere Road and 41.5µg/m^3 at 7 Sicklesmere Road) and at the roundabout of Kings Road and Parkway (41.5µg/m^3) close to a large proportion of the town centre car parking. All other locations were below the annual mean objective, although a small number of other locations (Fornham Road and at the Northgate Roundabout) were within 10% of the objective.

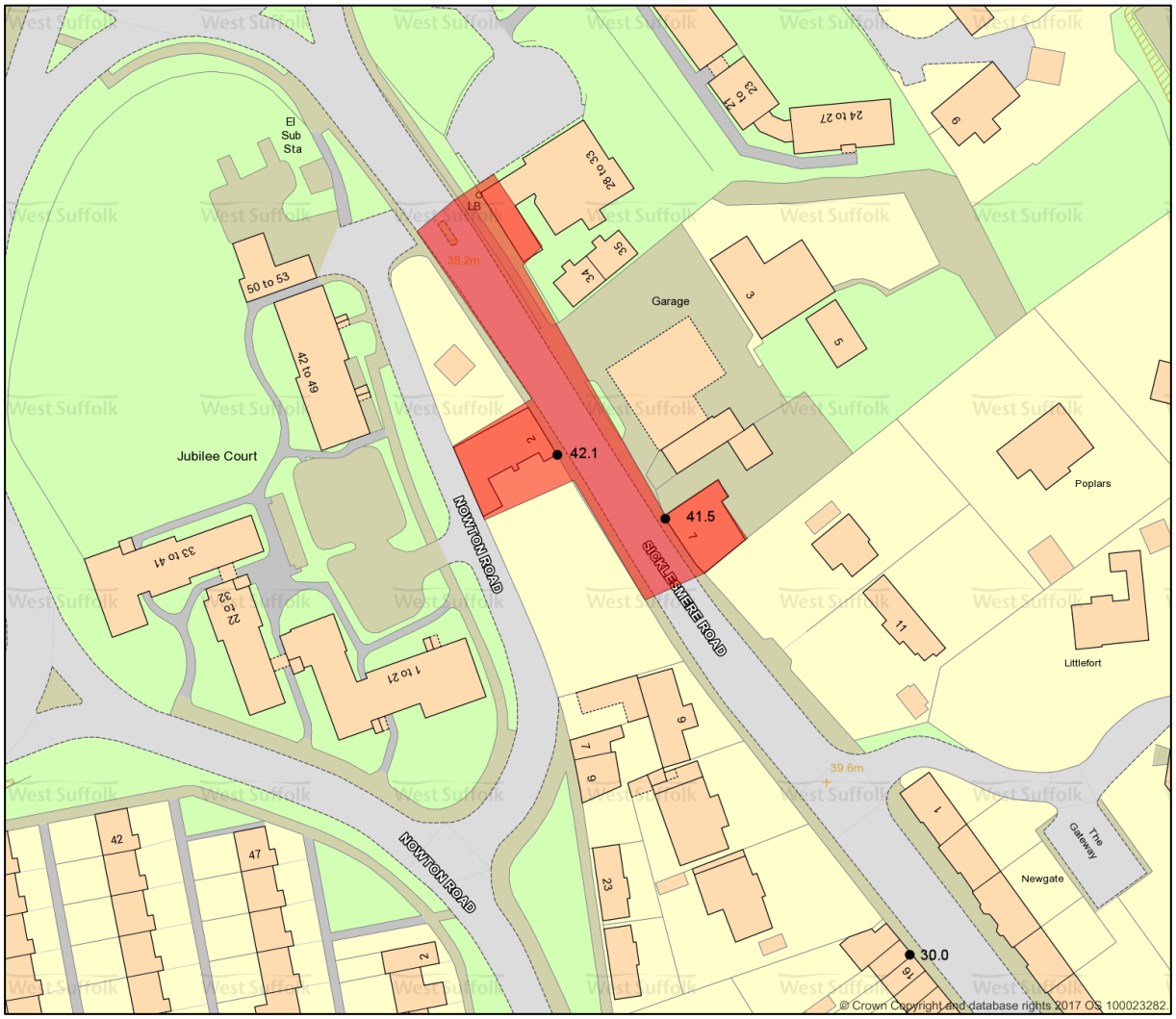
Large scale changes in monitoring locations occurred between 2014 and 2015 and it is difficult to establish long term trends from the last two years of data, however, the site at the junction of Cullum Road and Out Westgate has shown a 20% reduction over the last 10 years and a 10% reduction over the last 5 years indicating a steady long term decline in recorded levels of Nitrogen Dioxide pollution.

Monitoring at 2 Sicklesmere Road has shown two years of exceedances since monitoring at the site began. Only a single of year monitoring has occurred at 7 Sicklesmere Road, however, this has also shown an exceedance and it is considered that an AQMA should be declared for this location. Given that the number of properties close to the roadside are limited and the exceedances only slight, other properties on Sicklesmere Road are unlikley to be affected, other than the properties associated with Southgate House. Monitoring at 14 Sicklesmere Road shows recorded levels are significantly lower further from the Southgate Green Roundabout and therefore the proposed AQMA can be easily defined.

A long term solution is available for Sicklesmere Road in the form of a relief road associated with the South East Bury strategic growth area; however, we still consider it prudent to declare an AQMA to ensure that procedures are in place should the development be delayed or postponed for any reason. The relief road will need to be

completed prior to the occupation of the 400th dwelling within the south east Bury St Edmunds strategic developemnet site.

Figure 2. Proposed extent of Sicklesemere Road AQMA with monitoring points and recorded Nitrogen Dioxide concentrations



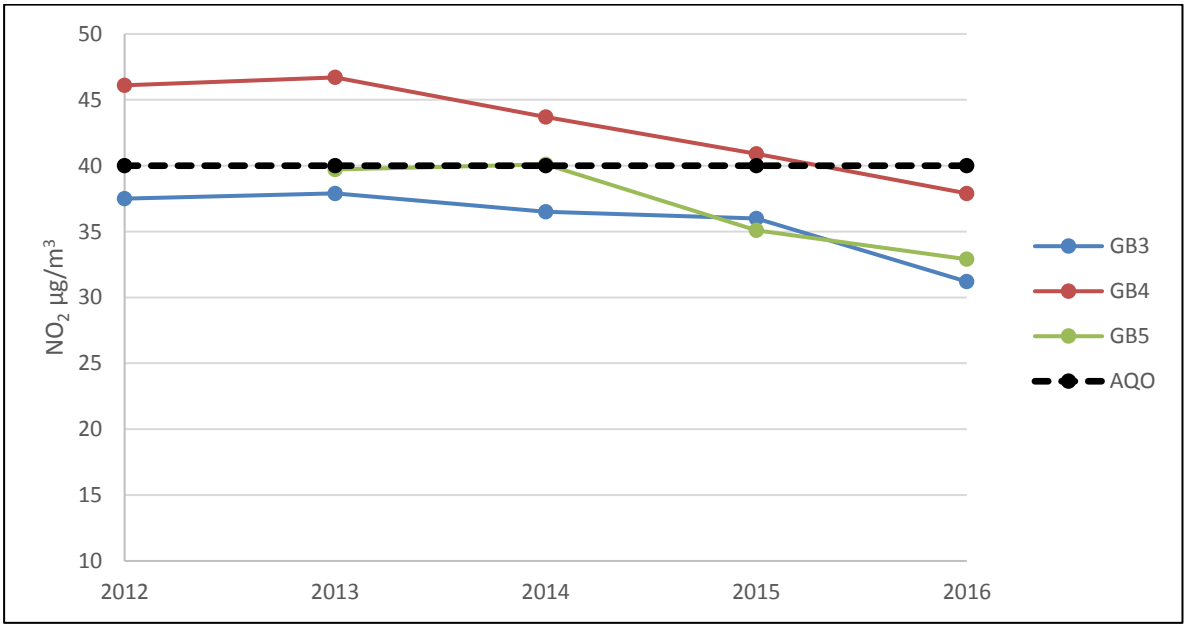
The monitoring point at the Kings Road / Parkway roundabout which recorded 41.5µg/m^3 Nitrogen Dioxide is not located on a residential property and the distance adjusted value to the nearest residential dwelling is 36.2µg/m^3. This location was below the objective in 2015 but wasn't monitored previous to 2015 so the long term trend is unclear. We will continue to monitor this location and may undertake a detailed assessment should pollution levels continue to rise.

Great Barton

Significant monitoring continues in Great Barton along the main road (A143), which cuts through the village. A row of cottages either side of, and including, the Post Office are situated close to this road, in contrast to the majority of the housing in the village which is situated back from the main road. An AQMA was in place between 2009 and 2012 when it was revoked on a technicality, a full review was provided in last years ASR, which resulted in a recommendation to re-declare the AQMA given the continued exceedance of the annual mean objective for Nitrogen Dioxide. The AQMA was re-declared on the 18th April 2017.

Monitoring in 2016 showed a continued reduction in recorded levels of Nitrogen Dioxide, with the levels within the AQMA falling just below the annual mean objective, being 37.9µg/m^3.

Figure 3. Trends in Concentration of Air Pollution in Great Barton (not adjusted to façade of buildings)



SEBC are currently working on the action plan for this AQMA with the first steering group meeting undertaken in June 2017. Recorded levels Nitrogen Dioxide pollution in 2016 was very slightly below the annual mean objective, however, this was partially due to unusually low levels recorded in January 2016, which were not reflected to such an extent at the other locations in Great Barton.

Haverhill

Monitoring in Haverhill continues to show compliance with the annual air quality objectives in all locations. The main area of concern is Withersfield Road (A1307) where levels have been close to the objectives in recent years with the highest recorded value of Nitrogen Dioxide being 36.5µg/m^3. A north west Haverhill relief road has planning permission linked to a strategic housing site. The relief road must be finished within 5 years of the commencement of the strategic housing development. Commencement of the strategic development is anticipated to be this year. The completion of the relief road is anticipated to significantly reduce the traffic, and therefore pollution levels on Withersfield Road.

Icklingham and Lakenheath

Monitoring in the villages of Icklingham and Lakenheath has recorded levels of nitrogen dioxide well within the objective levels.

Mildenhall

Mildenhall continues to show concentrations of pollutants well within the air quality objective levels and does not currently pose any significant concern. A number of the monitoring locations in Mildenhall were moved at the beginning of 2016 due to long term compliance with the objectives at historic sites within the Market Place, adjacent to the Bus Station and on Field Road, the highest concentration at any of these locations since 2012 being just 24.2µg/m^3.

There was also an awareness that parts of the town had never been monitored, hence the new locations at North Terrace (MLD1) and on Queensway (MLD2). Only the site with the highest levels of pollution, MLD3 (Kingsway) remained unmoved, however, concentrations of pollutants at this site remain well below the objective at 34.3µg/m^3. The new monitoring locations in Mildenhall did not raise any significant concerns although concentrations were slightly higher than the historic monitoring locations.

Newmarket Town Centre

Newmarket town centre has shown steady air quality improvements since the declaration of an AQMA along the High Street and Old Station Road in 2009 and the AQMA has recently (April 2017) been reduced in size to reflect this improvement.

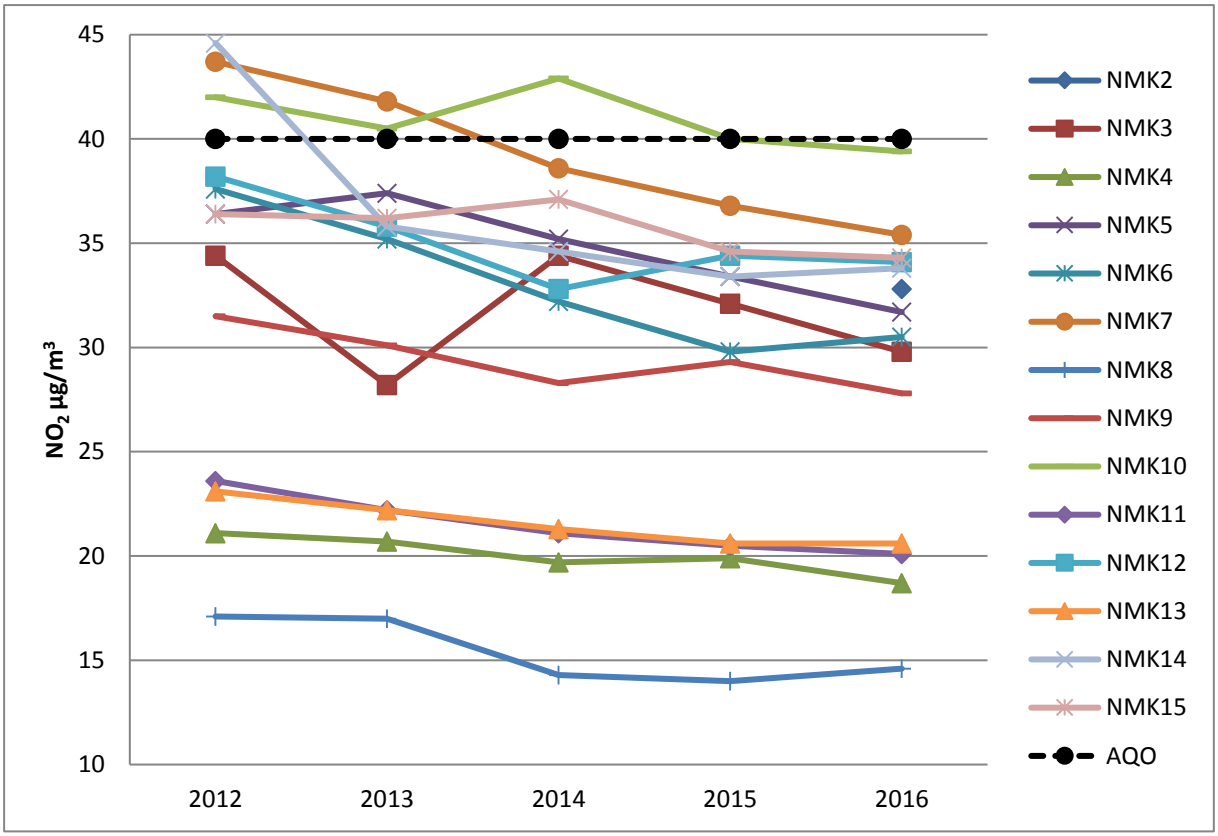
Following the changes to the AQMA, the High Street is no longer included within the boundaries of the AQMA. The steady reduction in pollution levels can be seen in Figure 2 below. It should also be noted that many of these readings are taken at kerbside and would be relevant to the hourly objective, which is only considered when the annual mean is greater than 60µg/m^3, whilst the annual mean of 40µg/m^3 should only apply at the façade of residential properties. The recorded values have been 'distance adjusted' to the nearest façade and are provided in Appendix B for information. For instance, NMK10 (High Street Taxi Rank) shows a non distance adjusted value of 39.4µg/m^3, which appears quite close to the annual mean objective, however, when distance adjusted to the façade of the nearest property, the value becomes 33.5µg/m^3, which is well below the annual mean objective. It should also be noted that many of the locations along the High Street are not located adjacent to residential properties (either ground level or first floor) and are therefore only relevant to the much less stringent hourly mean value.

The monitoring locations on Sun Lane and outside the Cancer Reasearch UK shop were discontinued during 2016 and at the end of 2016 respectively as they had consistently shown levels of pollutants at approximately half of the annual mean objective.

The AQMA has been retained along Old Station Road due to insufficient confidence in the data along this road. Prior to 2016 there was only a single monitoring location on Old Station Road, which has shown compliance with the annual mean objective, but suffered from poor recovery rates and therefore required annualisation on several occasions and may not have been located to represent the worst case scenerio for Old Station Road. Therefore two further locations were added on Old Station Road at the beginning of 2016 and a third new location at the beginning of 2017. None of the monitoring points within the remaining AQMA recorded an exceedance in 2016, however, we will retain the AQMA and continue to monitor the existing and new 2017 location to assess the need for retaining the AQMA in the longer term.

There remains local concern around idling in the taxi rank on the High Street, where the highest levels of Nitrogen Dioxide in Newmarket are measured. The Environment Team continue to liaise with officers in the Licensing Team to ensure improved compliance with the law, and we are working with Newmarket Town Council to facilitate the uptake of zero emission taxis.

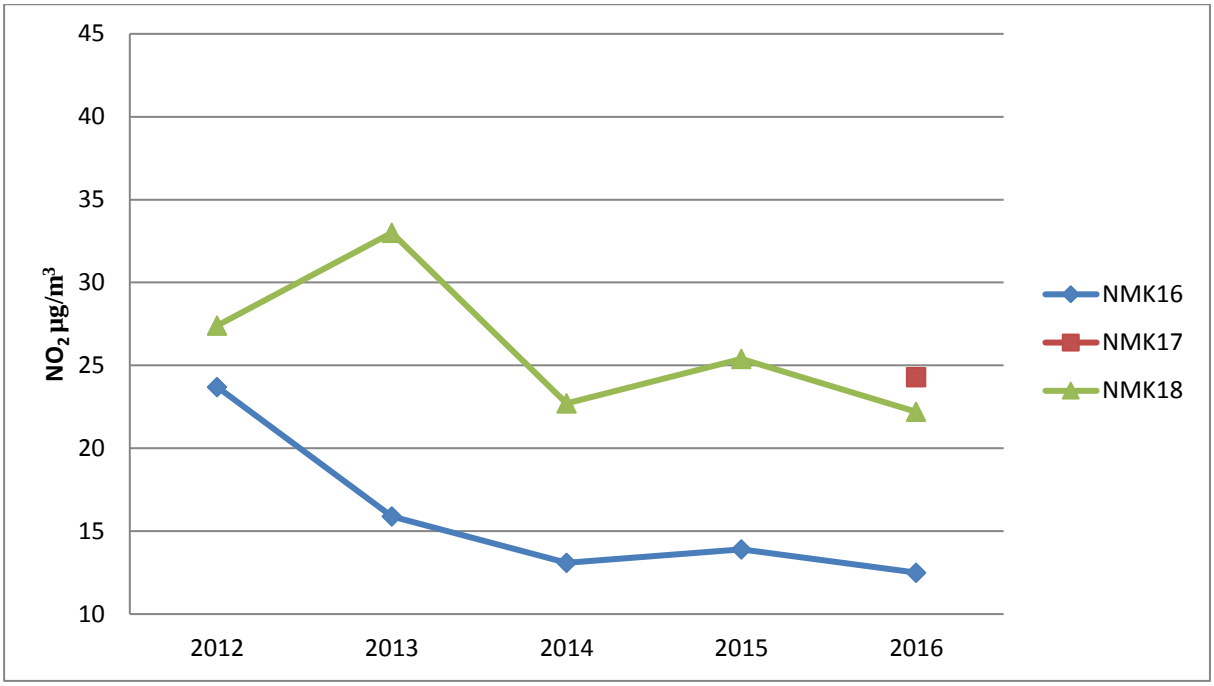
Figure 4. Trends in Concentration of Air Pollution in Newmarket Town Centre (not adjusted to façade of buildings)



Newmarket outskirts

The three monitoring locations outside the town centre show continued compliance well within the annual mean objective. One of these three locations was new in 2016 (NMK17, Exning Road/Depot Road), whilst the other two locations (NMK16, Station Approach and NMK18, Nimbus Way) show continued long term improvement as shown in the below graph.

Figure 5. Trends in Concentration of Air Pollution in Newmarket Outskirts (not adjusted to façade of buildings)



Appendix A: Monitoring Results

Table A.1 – Details of Non-Automatic Monitoring Sites – Forest Heath District Council

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Distance to Relevant Exposure (m) (1) (2)	Distance to kerb of nearest road (m) (2)	Tube collocated with a Continuous Analyser?	Height (m)
BRN1	Brandon – 6 Church Road	Roadside	578044	286249	NO_2	NO	1.1	1.7	NO	2.1
BRN2	Brandon – 104 London Road	Roadside	577993	286163	NO_2	NO	3.3	1.7	NO	2.2
BRN3	Brandon - Town Hall	Urban centre	578406	286460	NO_2	NO	0 - hourly N/A - annual	N/A	NO	2.4
BRN4	Brandon – London Road / Stores St	Roadside	578351	286503	NO_2	NO	2.7 (3)	1.6	NO	2.2
BRN5	Brandon - 52 London Road	Roadside	578206	286407	NO_2	NO	7.0	1.1	NO	2.2
BRN6	Brandon - London Rd/Coulson Lane	Roadside	578270	286467	NO_2	NO	7.6	1.5	NO	2.1
BRN7	Brandon - London Rd/Church Road	Kerbside	578073	286254	NO_2	NO	8.0	<1.0	NO	2.1
BRN8	Brandon - Hellesdon House, High Street	Roadside	578372	286774	NO2	NO	0	1.5	NO	2.3

Table A.1 – Details of Non-Automatic Monitoring Sites – Forest Heath District Council (Continued)

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Distance to Relevant Exposure (m) (1) (2)	Distance to kerb of nearest road (m) (2)	Tube collocated with a Continuous Analyser?	Height (m)
BRN9	Brandon - Riverside Lodge, High Street	Kerbside	578372	286867	NO_2	NO	3.3	<1.0	NO	2.4
BRN10	Brandon - 'Boots', High Street	Roadside	578395	286633	NO_2	NO	0 - hourly 0.5 - annual	2.5	NO	2.3
BRN11	Brandon - 175 Thetford Rd	Roadside	579160	286357	NO_2	NO	8.5	1.7	NO	2.1
LAK1	Lakenheath - Zebra Crossing	Kerbside	571378	282855	NO_2	NO	3.5	<1.0	NO	2.1
LAK2	Lakenheath - Albert Rolph Drive	Suburban	572071	281607	NO_2	NO	20.0	1.0	NO	2.2
MLD1	Mildenhall – 8 North Terrace	Roadside	571136	274878	NO_2	NO	1.5	1.9	NO	2.1
MLD2	Mildenhall – 2 Queensway	Roadside	571092	274785	NO_2	NO	0	1.8	NO	2.1
MLD3	Mildenhall - 14 Kingsway	Roadside	571326	274780	NO_2	NO	0.5	2.0	NO	2.1
ICK1	Icklingham	Roadside	577266	272907	NO_2	NO	0.3	1.0	NO	2.1
NMK1	Newmarket – 23 Old Station Road	Roadside	564716	263502	NO_2	YES	0	2.0	NO	2.2
NMK2	Newmarket – 36 Old Station Road	kerbside	564689	263500	NO2	YES	2.2	0.3	NO	2.2

Table A.1 – Details of Non-Automatic Monitoring Sites – Forest Heath District Council (Continued)

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Distance to Relevant Exposure (m) (1) (2)	Distance to kerb of nearest road (m) (2)	Tube collocated with a Continuous Analyser?	Height (m)
NMK3	Newmarket - Old Station Rd / Rous Road	Roadside	564707	263493	NO_2	YES	2.0	1.7	NO	2.2
NMK4	Newmarket - Sun Lane	Urban Centre	564347	263340	NO_2	NO	0 – hourly 12 - annual	10.0	NO	2.4
NMK5	Newmarket - 'Café Nero' crossing	Kerbside	564337	263343	NO_2	NO	0 – hourly N/A - annual	<1.0	NO	2.4
NMK6	Newmarket - 'KFC' downpipe	Roadside	564307	263338	NO_2	NO	0 – hourly 0 - annual	6.5	NO	2.3
NMK7	Newmarket - 'White Hart' crossing	Kerbside	564233	263274	NO_2	NO	0 – hourly 5.9 - annual	<1.0	NO	2.4
NMK8	Newmarket - Park area	Urban Background	564138	263301	NO_2	NO	0 – hourly N/A - annual	N/A	NO	2.5
NMK9	Newmarket - Blackbear lane/High St	Kerbside	564043	263159	NO_2	NO	3.0	<1.0	NO	2.2
NMK10	Newmarket - Taxi rank	Roadside(4)	564362	263381	NO2	NO	0 – hourly N/A - annual	<1.0	NO	2.5
NMK11	Newmarket - Market St 'EE'	Urban Centre	564380	263407	NO2	NO	0 – hourly N/A - annual	11.0	NO	2.0
NMK12	Newmarket - Clock tower crossing	Roadside	564550	263544	NO2	NO	0 – hourly 0.3 - annual	2.5	NO	2.4

Table A.1 – Details of Non-Automatic Monitoring Sites – Forest Heath District Council (Continued)

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Distance to Relevant Exposure (m) (1) (2)	Distance to kerb of nearest road (m) (2)	Tube collocated with a Continuous Analyser?	Height (m)
NMK13	Newmarket - 'Cancer Research' downpipe	Urban Centre	564516	263474	NO_2	NO	0 – hourly N/A - annual	13.0	NO	2.4
NMK14	Newmarket - 'Rutland Arms' crossing	Kerbside	564480	263464	NO_2	NO	0 – hourly N/A - annual	<1.0	NO	2.4
NMK15	Newmarket - 'Savers' lamppost	Roadside(4)	564383	263381	NO_2	NO	0 – hourly 5.5 - annual	2.5	NO	2.3
NMK16	Newmarket - Station Approach	Kerbside	564375	262849	NO_2	NO	N/A	<1.0	NO	2.4
NMK17	Newmarket – Exning Road/Depot Road	Roadside	563397	264498	NO_2	NO	6.1	1.8	NO	2.1
NMK18	Newmarket - Nimbus Way	Other (A14 Back-ground)	563205	265853	NO_2	NO	16.0	<1.0 (Nimbus Way)	NO	2.3

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 (e.g. no receptor or not monitoring close to a road)

(3) Receptor not adjacent to tube, but distances correct if monitoring location transposed along road to receptor location

(4) Where tubes are located adjacent to indented parking bays along Newmarket High Street, the distance to the kerb has been taken as the distance from the edge of the carriageway with flowing traffic rather from the physical kerb.

Table A.2 – Details of Non-Automatic Monitoring Sites – St Edmundsbury Borough Council

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Distance to Relevant Exposure (m) (1) (2)	Distance to kerb of nearest road (m) (2)	Tube collocated with a Continuous Analyser?	Height (m)
BSE1	2 Sicklesmere Road	Roadside	586253	263147	NO_2	NO	0	1.7	NO	2.1
BSE2	14 Sicklesmere Road	Roadside	586320	263053	NO_2	NO	0	4.0	NO	2.0
BSE3	Cullum Road roundabout	Roadside	585236	263746	NO_2	NO	0	3.4	NO	2.0
BSE4	Vinery Road	Roadside	584776	263440	NO_2	NO	1.5	2.0	NO	2.1
BSE5	Horringer Road lights	Roadside	584703	263483	NO_2	NO	2.0	1.5	NO	2.2
BSE6	Kings Road roundabout	Roadside	584905	264171	NO_2	NO	2.4	2.4	NO	2.1
BSE7	Northgate Lodge Roundabout (1)	Roadside	585446	264956	NO_2	NO	0(3)	1.8	NO	2.0
BSE8	Fornham Road (Northgate roundabout)	Roadside	585461	265050	NO_2	NO	6.0	1.5	NO	2.0
BSE9	Fornham Road (Tollgate)	Roadside	585085	265924	NO2	NO	2.8	1.5	NO	2.2

Table A.2 – Details of Non-Automatic Monitoring Sites – St Edmundsbury Borough Council (Continued)

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Distance to Relevant Exposure (m) (1) (2)	Distance to kerb of nearest road (m) (2)	Tube collocated with a Continuous Analyser?	Height (m)
BSE10	Samson Close	Suburban	584498	266084	NO_2	NO	9.5	1.4	NO	2.2
BSE11	Eastgate Street (Vinefields junction)	Roadside	585940	264618	NO_2	NO	0	2.7	NO	2.1
BSE12	8 Mustow Street	Roadside	585728	264371	NO_2	NO	1.8	2.6	NO	2.2
BSE14	19F Mustow Street	Roadside	585624	264334	NO_2	NO	0.2	2.3	NO	2.2
BSE15	7 Sicklesmere Road	Roadside	586273	263135	NO_2	NO	0	1.2	NO	1.8
BSE16	Northgate Lodge Roundabout (2)	Roadside	585424	264977	NO_2	NO	0.4	1.2	NO	1.9
BSE17	Tayfen Road	Roadside	585264	264921	NO_2	NO	N/A	2.1	NO	1.9
BSE18	Southgate Street	Roadside	586126	263328	NO2	NO	0.2	1.6	NO	1.9
GB2	Downing Drive	Suburban	588917	267370	NO2	NO	16.0	1.5	NO	1.9

Table A.2 – Details of Non-Automatic Monitoring Sites – St Edmundsbury Borough Council (Continued)

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Pollutants Monitored	In AQMA?	Distance to Relevant Exposure (m) (1) (2)	Distance to kerb of nearest road (m) (2)	Tube collocated with a Continuous Analyser?	Height (m)
GB3	The Forge Bungalows(4)	Roadside	589163	267013	NO_2	NO	4.0	1.4	NO	2.2
GB4	Post Office(4)	Roadside	589130	266969	NO_2	YES	0	1.4	NO	2.2
GB5	Church Road junction(4)	Roadside	588993	266838	NO_2	NO	22.0	1.3	NO	2.2
HH1	Shetland Road	Suburban	568609	245575	NO_2	NO	8.7	1.7	NO	2.1
HH2	Wratting Road	Roadside	567270	245981	NO_2	NO	3.0	1.8	NO	2.1
HH3	29 Withersfield Road	Roadside	566891	245892	NO_2	NO	2.4	1.7	NO	2.2
HH5	22 Withersfield Road	Roadside	566941	245850	NO_2	NO	0.3	1.4	NO	2.1

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 (e.g. no receptor or not monitoring close to a road)

(3) Receptor not adjacent to tube, but distances correct if monitoring location transposed along road to receptor location

(4) Locations are triplicates

Table A.3 – Annual Mean NO_2 Monitoring Results - Forest Heath

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2016 (%) (2)	NO_2 Annual Mean Concentration (µg/m^3) (3)				
					2012	2013	2014	2015	2016
BRN1	Roadside	Diffusion Tube	100	100	-	**-**	**-**	**-**	21.3
BRN2	Roadside	Diffusion Tube	100	100	-	-	-	-	33.2
BRN3	Urban centre	Diffusion Tube	100	100	12.0	15.3	14.5	14.1	13.5
BRN4	Roadside	Diffusion Tube	100	100	36.9	37.0	36.9	33.0	30.5
BRN5	Roadside	Diffusion Tube	83	83	39.3	**40.4**	37.8	39.4	37.7
BRN6	Roadside	Diffusion Tube	92	92	37.3	33.9	28.4	27.4	26.4
BRN7	Kerbside	Diffusion Tube	100	100	35.6	34.3	35.6	33.5	32.0
BRN8	Roadside	Diffusion Tube	83	83	31.2	28.6	27.4	26.3	23.4
BRN9	Kerbside	Diffusion Tube	75	75	32.9	36.6	32.5	27.9	29.6
BRN10	Roadside	Diffusion Tube	92	92	38.5	38.6	38.5	35.4	33.3
BRN11	Roadside	Diffusion Tube	100	100	22.7	18.9	19.0	17.3	17.6
LAK1	Kerbside	Diffusion Tube	100	100	21.2	21.4	19.2	18.7	20.0
LAK2	Suburban	Diffusion Tube	100	100	16.7	12.2	14.3	12.7	12.0
MLD1	Roadside	Diffusion Tube	100	100	-	-	-	-	23.3

Table A.3 – Annual Mean NO_2 Monitoring Results - Forest Heath (Continued)

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2016 (%) (2)	NO_2 Annual Mean Concentration (µg/m^3) (3)				
					2012	2013	2014	2015	2016
MLD2	Roadside	Diffusion Tube	92	92	-	-	-	-	26.8
MLD3	Roadside	Diffusion Tube	100	100	37.7	35.6	33.5	35.5	34.3
ICK1	Roadside	Diffusion Tube	100	100	-	-	-	-	20.7
NMK1	Roadside	Diffusion Tube	92	92	-	-	-	-	25.3
NMK2	Kerbside	Diffusion Tube	75	75	-	-	-	-	32.8
NMK3	Roadside	Diffusion Tube	92	92	34.4	28.2 (4)	34.4 (3)	32.1	29.8
NMK4	Urban Centre	Diffusion Tube	100	42	21.1	20.7	19.7	19.9	18.7
NMK5	Kerbside	Diffusion Tube	100	100	36.4	37.4	35.2	33.4	31.7
NMK6	Roadside	Diffusion Tube	100	100	37.6 (4)	35.2	32.2	29.8	30.5
NMK7	Kerbside	Diffusion Tube	100	100	**43.7**	**41.8 (4)**	38.6	36.8	35.4
NMK8	Urban Background	Diffusion Tube	92	92	17.1	17.0	14.3	14.0	14.6
NMK9	Kerbside	Diffusion Tube	92	92	31.5	30.1	28.3	29.3	27.8
NMK10	Roadside(4)	Diffusion Tube	92	92	**42.0**	**40.5**	**42.9**	**40.0**	39.4
NMK11	Urban Centre	Diffusion Tube	83	83	23.6	22.2	21.1	20.5	20.1
NMK12	Roadside	Diffusion Tube	75	75	38.2	35.8	32.8	34.4	34.1

Table A.3 – Annual Mean NO_2 Monitoring Results – Forest Heath (Continued)

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2016 (%) (2)	NO_2 Annual Mean Concentration (µg/m³) (3)				
					2012	2013	2014	2015	2016
NMK13	Urban Centre	Diffusion Tube	83	83	23.1	22.2	21.3	20.6	20.6
NMK14	Kerbside	Diffusion Tube	100	100	**44.6** (4)	35.8	34.6	33.4	33.8
NMK15	Roadside(4)	Diffusion Tube	100	100	36.4	36.2	37.1	34.6	34.3
NMK16	Kerbside	Diffusion Tube	83	83	23.7 (4)	15.9	13.1	13.9	12.5
NMK17	Roadside	Diffusion Tube	100	100	-	-	-	-	24.3
NMK18	Other (A14 Back-ground)	Diffusion Tube	100	100	27.4	33.0 (4)	22.7	25.4	22.2

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

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

☐ **If applicable, all data has been distance corrected for relevant exposure**

Notes:

Exceedances of the NO_2 annual mean objective of 40µg/m³ are shown in **bold**.

NO_2 annual means exceeding 60µg/m³, 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.

(4) Based on less than 75% data recovery and not annualised in relevant reports. Values should be treated with caution.

Table A.4 – Annual Mean NO_2 Monitoring Results – St Edmundsbury

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2016 (%) (2)	NO_2 Annual Mean Concentration (µg/m^3) (3)				
					2012	2013	2014	2015	2016
BSE1	Roadside	Diffusion Tube	100	100	-	-	-	**45.3**	**42.1**
BSE2	Roadside	Diffusion Tube	100	100	-	-	-	31.2	30.0
BSE3	Roadside	Diffusion Tube	100	100	33.7	32.9	31.7	32.5	29.5
BSE4	Roadside	Diffusion Tube	80	33	-	-	-	25.8	23.6
BSE5	Roadside	Diffusion Tube	100	100	-	-	-	26.4	28.6
BSE6	Roadside	Diffusion Tube	100	100	-	-	-	37.5	**41.5**
BSE7	Roadside	Diffusion Tube	83	83	28.3	28.3	26.5	29.4 (4)	28.2
BSE8	Roadside	Diffusion Tube	100	100	-	-	-	29.1	30.3
BSE9	Roadside	Diffusion Tube	92	92	-	-	-	38.0	36.5
BSE10	Suburban	Diffusion Tube	100	100	14	14.6	14.1	13.4	12.9
BSE11	Roadside	Diffusion Tube	75	75	-	-	-	24.2	23.2

Table A.4 – Annual Mean NO_2 Monitoring Results – St Edmundsbury (Continued)

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2016 (%) (2)	NO_2 Annual Mean Concentration (µg/m^3) (3)				
					2012	2013	2014	2015	2016
BSE12	Roadside	Diffusion Tube	66	66	-	-	-	24.2	23.5
BSE14	Roadside	Diffusion Tube	92	92	-	-	-	-	32.1
BSE15	Roadside	Diffusion Tube	100	100	-	-	-	-	**41.5**
BSE16	Roadside	Diffusion Tube	92	92	-	-	-	-	36.4
BSE17	Roadside	Diffusion Tube	92	92	-	-	-	-	33.0
BSE18	Roadside	Diffusion Tube	66	66	-	-	-	-	35.3
GB2	Suburban	Diffusion Tube	100	100	-	-	-	10.1	10.0
GB3	Roadside	Diffusion Tube	100	100	37.5	37.9	36.5	36.0	31.2
GB4	Roadside	Diffusion Tube	97	97	**46.1**	**46.7**	**43.7**	**40.9**	37.9
GB5	Roadside	Diffusion Tube	97	97	-	39.7	**40.1**	35.1	32.9
HH1	Suburban	Diffusion Tube	100	100	13.7	14.5	13.7	13.3	13.0

Table A.4 – Annual Mean NO_2 Monitoring Results – St Edmundsbury (Continued)

Site ID	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2016 (%) (2)	NO_2 Annual Mean Concentration (µg/m^3) (3)				
					2012	2013	2014	2015	2016
HH2	Roadside	Diffusion Tube	83	83	-	-	-	32.0	30.7
HH3	Roadside	Diffusion Tube	100	100	38.9	36.9	38.3	38.3	34.1
HH5	Roadside	Diffusion Tube	92	92	-	-	-	-	36.5

Appendix B: Full Monthly Diffusion Tube Results for 2016

Table B.1 – NO_2 Monthly Diffusion Tube Results – 2016 – Forest Heath

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 (0.77) and Annualised (1)	Distance Corrected to Nearest Exposure (2)
BRN1	30.4	33.4	29.3	26.5	20.2	21.7	21.7	22.4	27.6	22	39.8	37	27.7	21.3	20.3
BRN2	42.4	47.5	45.6	42.5	44.7	37.4	39.9	38.2	42.2	41.1	51.2	44.5	43.1	33.2	28
BRN3	20.5	22.7	19.5	13.8	14.1	13.8	12	11.2	15.5	15.3	22.4	29.2	17.5	13.5	13.5 (3)
BRN4	31	42.4	45.1	36.9	38.3	37.9	35.8	33.6	37.7	42.6	44.2	49.8	39.6	30.5	26.4
BRN5	58.2	50.8	46.8	43.5			42.7	40.1	49.3	45	55.2	58	49.0	37.7	27.2
BRN6	41.6	35.7	33.8	28.2	24.3		28.3	29.2	35	29.6	44.5	47.4	34.3	26.4	20.7
BRN7	37	44.7	39.5	44.4	43.1	36.7	35.8	28.9	46.2	41	45.7	56.4	41.6	32.0	23.1
BRN8	25.3	30.9	31.2	30.5	29.3		27.2		35.3	28.4	28	37.6	30.4	23.4	23.4
BRN9	36.6	42.6	45	33.4		40.1	32.8	28	40.9			46.6	38.4	29.6	24.4
BRN10	39.9	44.6	46.8	43.1	46.6	36.7		31.8	45.3	44.5	49.3	47.7	43.3	33.3	32.2
BRN11	29.9	30.2	23	19.3	18.3	17	17.2	14.6	20.2	18.7	32.8	33.8	22.9	17.6	15.3
LAK1	31.8	30.3	29	22.7	23.1	20.7	19	15.7	23.3	23.5	34.8	38.2	26.0	20.0	17.6
LAK2	21.4	21	14.8	12	10.2	9	13.9	9.9	14.7	11.5	21	27.6	15.6	12.0	12.0
MLD1	35.4	37.9	31.9	26.7	26.6	22.8	24.4	21.1	32	25.1	37.1	41.5	30.2	23.3	21.8
MLD2	35.9	38.3	35.9		36.6	26.1	33.9	28.8	40.5	28.6	40	38	34.8	26.8	26.8

Table B.1 – NO_2 Monthly Diffusion Tube Results – 2016 – Forest Heath (continued)

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 (0.77) and Annualised (1)	Distance Corrected to Nearest Exposure (2)
MLD3	49.5	42	47.9	35.9	43.9	34.1	38.2	39	47.4	41.7	60.5	53.9	44.5	34.3	33.1
ICK1	31.1	25.2	24.9	25.3	21.6	19.7	25.2	22.6	27.7	20.2	38.9	39.5	26.8	20.7	20.2
NMK1	36		37.4	33.9	31.5	27.5	26.7	25.7	31.2	30.7	42.2	38.4	32.8	25.3	25.3
NMK2		52.6	42		33.1		42.1	37.7	42.3	30.7	53.7	49.7	42.7	32.8	25.6
NMK3	48.2	39.5		36.2	33.4	26	37	34.4	38.3	27.1	50.1	55.1	38.7	29.8	26.7
NMK4	27.6	29.7	28.1	21.6	18.2								25.0	18.7	18.7
NMK5	41.4	47.6	39.7	40.1	35.1	38	31	36.5	37.8	41.1	53.8	52.5	41.2	31.7	24.4
NMK6	37.1	43.5	46.8	42.5	33.1	34.7	34.2	30.7	34.5	44.9	46.3	46.7	39.6	30.5	30.5
NMK7	46.8	41.9	48.3	48.8	37	40.2	44.4	42.2	42.9	46.2	64.5	48.3	46.0	35.4	26.3
NMK8	24.6	23.4	20.8		12.6	11	12.6	11.1	16.3	18.3	26.8	31.3	19.0	14.6	14.6
NMK9	39.8	41.8	40.3	37.8	29.6	33.3	28.7	25.5		36.9	40.9	42.6	36.1	27.8	23.4
NMK10	58.9	56.1	53.8	47.6	42.7		47.2	45.3	45.5	42.4	67.1	56.3	51.2	39.4	33.5
NMK11	31.6	30.7	28.9		14.7		20	17.1	23.8	25.2	36.9	31.6	26.1	20.1	20.1
NMK12		48.6	44.6	43.8	37	28.8	39.2		43		58.4	55.5	44.3	34.1	33.6
NMK13	28	30.2	27.4	25.7	20.7			20	23.6	27.4	33.9	30.5	26.7	20.6	20.6
NMK14	48	47.3	49.9	41.9	39.5	38	36.8	34.9	41.4	42.4	60.6	45.7	43.9	33.8	27.0
NMK15	55.6	49.8	44	39.2	40	34.7	34.5	33.6	46.4	43.2	57.4	56.4	44.6	34.3	28.6

Table B.1 – NO_2 Monthly Diffusion Tube Results – 2016 – Forest Heath (continued)

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 (0.77) and Annualised (1)	Distance Corrected to Nearest Exposure (2)
NMK16	18.6		20	14.8	13.4	10.9	15.7	10.4	15.9	15.6		27.6	16.3	12.5	
NMK17	39.7	33.7	31.6	29.8	22.8	23.3	27.8	25	30.8	29.6	39.9	44.4	31.5	24.3	20.1
NMK18	27.1	35.9	35.8	33.3	23.5	20.9	21.8	25.6	24.7	30.4	33.2	34.2	28.9	22.2	16.4

☒ **National bias adjustment factor used**

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

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 using FHDC background of 12µg/m^3

(3) Urban Centre located on side of Town Hall, no relevant location for annual mean

(4) Newmarket High Street diffusion tubes are at a relevant receptor for the hourly objective, but have been distance corrected to the façade to allow comparison to annual mean objective, although it should be noted that not all locations on the High Street are adjacent to a residential property.

Table B.2 – NO_2 Monthly Diffusion Tube Results – 2016 – St Edmundsbury

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 (0.77) and Annualised (1)	Distance Corrected to Nearest Exposure (2)
BSE1	54.7	63.7	45.7	56.5	49.6	54.3	49.1	49.5	59.2	54.3	56	63.7	54.7	**42.1**	**42.1**
BSE2	45.3	43.4	38.1	34.8	34.8	31.3	32.1	32.3	40.3	38.7	52	44.5	39.0	30.0	30.0
BSE3	47.6	45.3	42.4	35.2	30.7	33.1	32.8	28.7	36.9	38.7	47.7	40.8	38.3	29.5	29.5
BSE4	39.9		27.5	34.2	26.8								32.1	23.6	21.8
BSE5	36.1	40.1	33.4	41.4	31.8	34.5	30.5	31.1	30.1	42.8	50	43.2	37.1	28.6	25.1
BSE6	50.7	58.7	55	52.4	49.7	44.8	36.6	41.5	56.2	56.2	71.8	73.7	53.9	**41.5**	36.2
BSE7		40.3	38.9	34.6		30	29.5	30.6	34	39.5	46.5	42.6	36.7	28.2	28.2
BSE8	44.3	42.1	42.2	42.1	35.9	31.5	26	27.5	40.2	42.8	48.9	49.1	39.4	30.3	23.1
BSE9	56.8	59.2	47.9	37.1	41.2	42.8	44.2	41.4	50.6	46.5		54.1	47.4	36.5	30.4
BSE10	22.2	21.2	14.9	13.2	11.8	9.8	9.8	10.3	17.9	14.4	25.5	30.7	16.8	12.9	11.6
BSE11		35.3	31	29.4	28.2	27.7	20.5	21.8		36.5	41.1		30.2	23.2	23.2
BSE12	35.7		35.1	32.2	30		26	25.1		32.6		38.9	32.0	23.5	21.7
BSE14	50.6	46.2	44.2	43.8	33.9		39.9	33.3	48.8	36.3	26.8	55.3	41.7	32.1	31.7
BSE15	47.9	47	43.6	40.8	45.3	81.1	39.6	32.8	47.8	53.3	66.7	100.5	53.9	**41.5**	**41.5**
BSE16	47.7	49	50.5	44.8	45.9	41.6	39.6	39.5		47.4	56.1	58.2	47.3	36.4	34.8
BSE17	39.1	45.6	47.4	46	38.8	35.9	32.9	36.5	40.8	51.4	57.5		42.9	33.0	
BSE18			45.1	41.7		34.8	27.5	28.6	38.2	46.1	49.9		39.0	35.3	34.6

Table B.2 – NO_2 Monthly Diffusion Tube Results – 2016 – St Edmundsbury

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 (0.77) and Annualised (1)	Distance Corrected to Nearest Exposure (2)
GB2	20.9	18.6	12	9.9	6.6	7.5	8.3	7.8	13.8	11.2	17.1	22.3	13.0	10.0	10.0
GB3A	54.2	46.9	39.2	41	34.4	32.3	34.8	31.6	42.8	32.7	52.6	56.3	41.6	31.2	25.0
GB3B	53.2	42.4	38.6	39.2	29.4	33.1	36.7	32.6	42	25.6	49.6	51.4	39.5		
GB3C	59.1	47.7	39.3	38	29.4	32.7	35.5	31	44.9	31	48.1	48.8	40.5		
GB4A	37.5	51.3	52.3	51.5	63.3	49.5	40.4	43	49.4	49.8	71.8	63.3	51.9	37.9	37.9
GB4B	45.9	47.1	50.8	50.5	39.7	50.2	40.2	43.4	50.6	52.9	59.1	55.1	48.8		
GB4C	45.5	47.4	47.1	48	41.5	47.2	42.8	40.8	48	48.6		58	46.8		
GB5A	46.2	39.5	39.5	38.6	39.4	38.8	37.5	38.1	48.9	43.7	52.5	53.2	43.0	32.9	18.8
GB5B	44.2	45.5	36.7	31.4	43.7	37.4	35	36.2	44	43.8	56.1	50.7	42.1		
GB5C	48.7	43	39.3	36.4	38.5		38.4	33.5	43.4	44.5	57.7	49.8	43.0		
HH1	25.6	21.5	15.1	13.2	12.3	9.2	10.4	10.3	15	13.9	26.8	29	16.9	13.0	11.8
HH2	44.4	48.4	41.5	42.8	33.4	35.2	32.5	30.8		32.4	57.1		39.9	30.7	26.1
HH3	55.4	52.4	37.5	36.1	40.2	37.3	39.5	34.9	50	38.6	55.8	53.1	44.2	34.1	29.3
HH5	44.2	45.2	46.8	49.6	42.6	36.2		51.4	44.3	45.8	61.6	54.1	47.4	36.5	35.4

☒ **National bias adjustment factor used**
☒ **Annualisation has been conducted where data capture is <75%**

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 using SEBC background of 10µg/m^3

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

Bias Adjustment Spreadsheet

National Diffusion Tube Bias Adjustment Factor Spreadsheet — Spreadsheet Version Number: 03/17

Follow the steps below **in the correct order** to show the results of **relevant** co-location studies
Data only apply to tubes exposed monthly and are not suitable for correcting individual short-term monitoring periods
Whenever presenting adjusted data, you should state the adjustment factor used and the version of the spreadsheet
This spreadhseet will be updated every few months: the factors may therefore be subject to change. This should not discourage their immediate use.

This spreadsheet will be updated at the end of June 2017

LAQM Helpdesk Website

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.

Spreadsheet maintained by the National Physical Laboratory. Original compiled by Air Quality Consultants Ltd.

Step 1:	Step 2:	Step 3:	Step 4:
Select the Laboratory that Analyses Your Tubes from the Drop-Down List	Select a Preparation Method from the Drop-Down List	Select a Year from the Drop-Down List	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[3] shown in blue at the foot of the final column.
If a laboratory is not shown, we have no data for this laboratory.	If a preparation method is not shown, we have no data for this method at this laboratory.	If a year is not shown, we have no data[2]	If you have your own co-location study then see footnote[4]. If uncertain what to do then contact the Local Air Quality Management Helpdesk at LAQMHelpdesk@uk.bureauveritas.com or 0800 0327953

Analysed By[1]	Method (To undo your selection, choose (All) from the pop-up list)	Year[2] (To undo your selection, choose (All))	Site Type	Local Authority	Length of Study (months)	Diffusion Tube Mean Conc. (Dm) (µg/m³)	Automatic Monitor Mean Conc. (Cm) (µg/m³)	Bias (B)	Tube Precision[5]	Bias Adjustment Factor (A) (Cm/Dm)
ESG Didcot	50% TEA in acetone	2016	UI	Stockton on Tees	10	23	18	26.7%	P	**0.79**
ESG Didcot	50% TEA in acetone	2016	R	Stockton on Tees	11	19	15	30.0%	G	**0.77**
ESG Didcot	50% TEA in acetone	2016	R	Vale of Glamorgan	10	40	28	43.7%	G	**0.70**
ESG Didcot	50% TEA in acetone	2016	R	Vale of White Horse District Council	11	33	29	15.3%	G	**0.87**
ESG Didcot	50% TEA in acetone	2016	KS	Leeds City Council	9	66	55	20.1%	S	**0.83**
ESG Didcot	50% TEA in acetone	2016	KS	Marylebone Road Intercomparison	12	104	79	30.8%	G	**0.76**
ESG Didcot	50% TEA in acetone	2016	UB	Slough Borough Council	12	43	40	6.7%	G	**0.94**
ESG Didcot	50% TEA in acetone	2016	UB	Slough Borough Council	12	34	29	19.6%	G	**0.84**
ESG Didcot	50% TEA in acetone	2016	UC	Slough Borough Council	11	38	30	26.5%	G	**0.79**
ESG Didcot	50% TEA in acetone	2016	R	Tunbridge Wells	12	57	44	30.6%	G	**0.77**
ESG Didcot	50% TEA in acetone	2016	R	Cambridge City Council	10	49	37	32.6%	G	**0.75**
ESG Didcot	50% TEA in acetone	2016	R	City of Wolverhampton Council	12	44	39	13.5%	G	**0.88**
ESG Didcot	50% TEA in acetone	2016	R	City of Wolverhampton Council	11	53	43	22.7%	G	**0.81**
ESG Didcot	50% TEA in acetone	2016	B	Gravesham Borough Council	12	31	23	33.5%	G	**0.75**
ESG Didcot	50% TEA in acetone	2016	B	Gravesham Borough Council	12	40	30	36.1%	G	**0.73**
ESG Didcot	50% TEA in acetone	2016	R	Horsham District Council	12	35	27	30.3%	G	**0.77**
ESG Didcot	50% TEA in acetone	2016	R	Horsham District Council	11	33	29	12.2%	G	**0.89**
ESG Didcot	50% TEA in acetone	2016	R	Horsham District Council	10	34	25	34.0%	G	**0.75**
ESG Didcot	50% TEA in acetone	2016	B	Maidstone Borough Council	11	15	12	25.3%	G	**0.80**
ESG Didcot	50% TEA in acetone	2016	R	Medway Council	12	35	26	36.6%	G	**0.73**
ESG Didcot	50% TEA in acetone	2016	B	Medway Council	9	21	11	88.1%	G	**0.53**
ESG Didcot	50% TEA in acetone	2016	KS	Suffolk Coastal DC	12	43	37	17.3%	G	**0.85**
ESG Didcot	50% TEA in acetone	2016	UB	City of York Council	9	22	16	38.6%	G	**0.72**
ESG Didcot	50% TEA in acetone	2016	R	City of York Council	12	39	29	34.1%	G	**0.75**
ESG Didcot	50% TEA in acetone	2016	R	City of York Council	12	33	25	33.4%	G	**0.75**
ESG Didcot	50% TEA in acetone	2016	R	City of York Council	12	41	27	51.2%	G	**0.66**
ESG Didcot	50% TEA in acetone	2016	KS	Leeds City Council	9	66	55	20.1%	S	**0.83**
ESG Didcot	50% TEA in acetone	2016	R	Leeds City Council	12	57	44	27.6%	S	**0.78**
ESG Didcot	50% TEA in acetone	2016		**Overall Factor[3] (30 studies)**				**Use**		**0.77**

The Defra Bias Adjustment spreadsheet (March 2017 Version) was accessed to determine the bias adjustment factor used for 2016. The extract from the spreadsheet is provided above, showing the value to be used for ESG (Didcot) for the 50% TEA in acetone as used in West Suffolk is **0.77.**

Annualisation Details

St Edmundsbury Borough Council

Insufficient local background sites on the AURN network to make an appropriate assessment, however, three local suburban background sites exist, all with 100% data collection, which have been used within the annualisation, these being sites BSE10, GB2 and HH1.

Sites BSE4, BSE12 and BSE18 all had less than 75% data collection and have been annualised as shown below

Suburban Background sites full year data

Location	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Unadjusted Average
BSE10	22.2	21.2	14.9	13.2	11.8	9.8	9.8	10.3	17.9	14.4	25.5	30.7	16.8
GB2	20.9	18.6	12	9.9	6.6	7.5	8.3	7.8	13.8	11.2	17.1	22.3	13.0
HH1	25.6	21.5	15.1	13.2	12.3	9.2	10.4	10.3	15	13.9	26.8	29	16.9

BSE18

Location	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Unadjusted Average	Whole Year to analysed Ratio
BSE18			45.1	41.7		34.8	27.5	28.6	38.2	46.1	49.9		39.0	
BSE10			14.9	13.2		9.8	9.8	10.3	17.9	14.4	25.5		14.5	1.161
GB2			12	9.9		7.5	8.3	7.8	13.8	11.2	17.1		11.0	1.187
HH1			15.1	13.2		9.2	10.4	10.3	15	13.9	26.8		14.2	1.184
												Average Ratio		**1.177**

BSE4

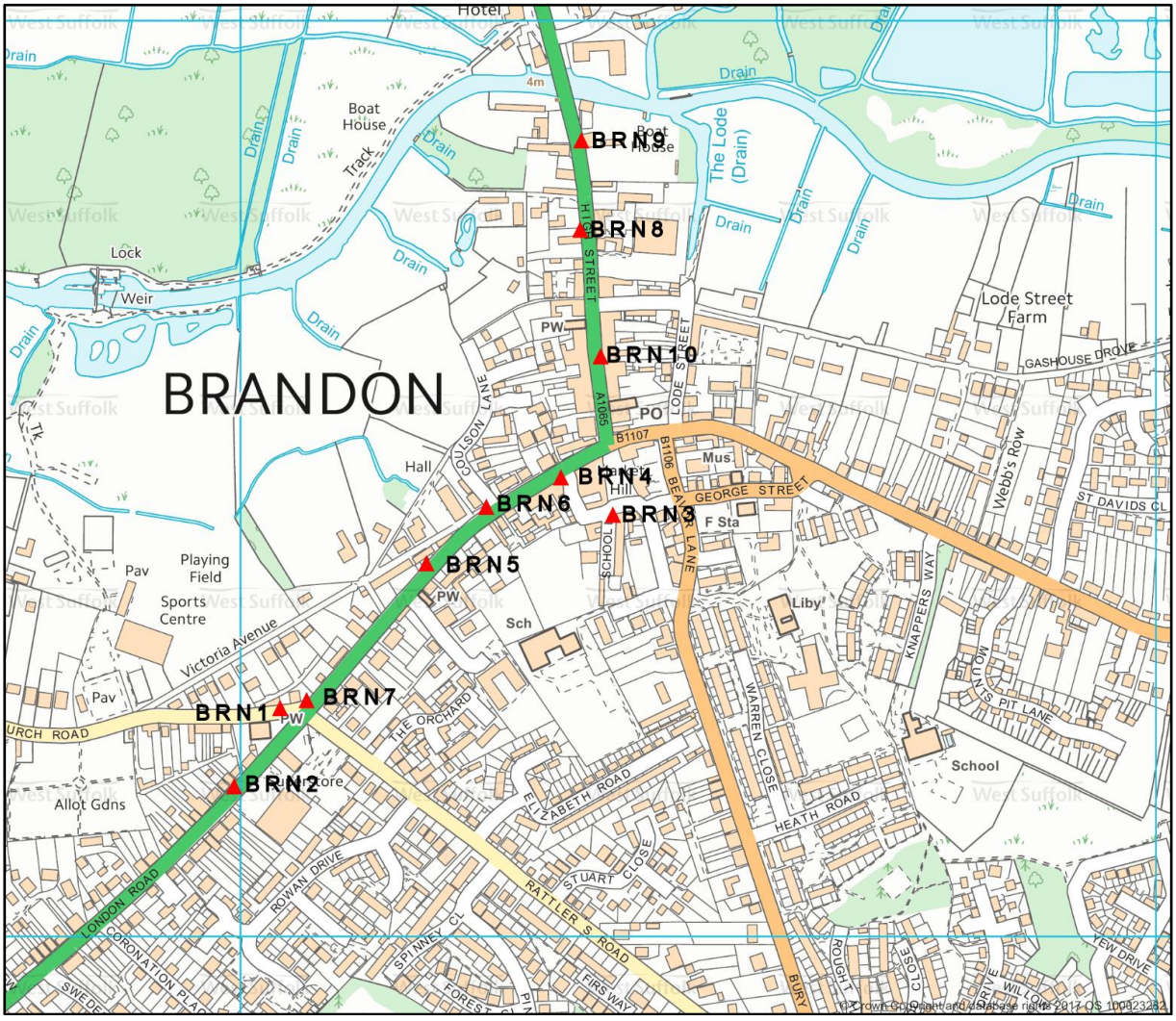
Location	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Unadjusted Average	Whole Year to analysed Ratio
BSE4	39.9		27.5	34.2	26.8								32.1	
BSE10	22.2		14.9	13.2	11.8								15.5	0.924
GB2	20.9		12	9.9	6.6								12.4	0.950
HH1	25.6		15.1	13.2	12.3								16.6	0.982
												Average Ratio		**0.952**

BSE12

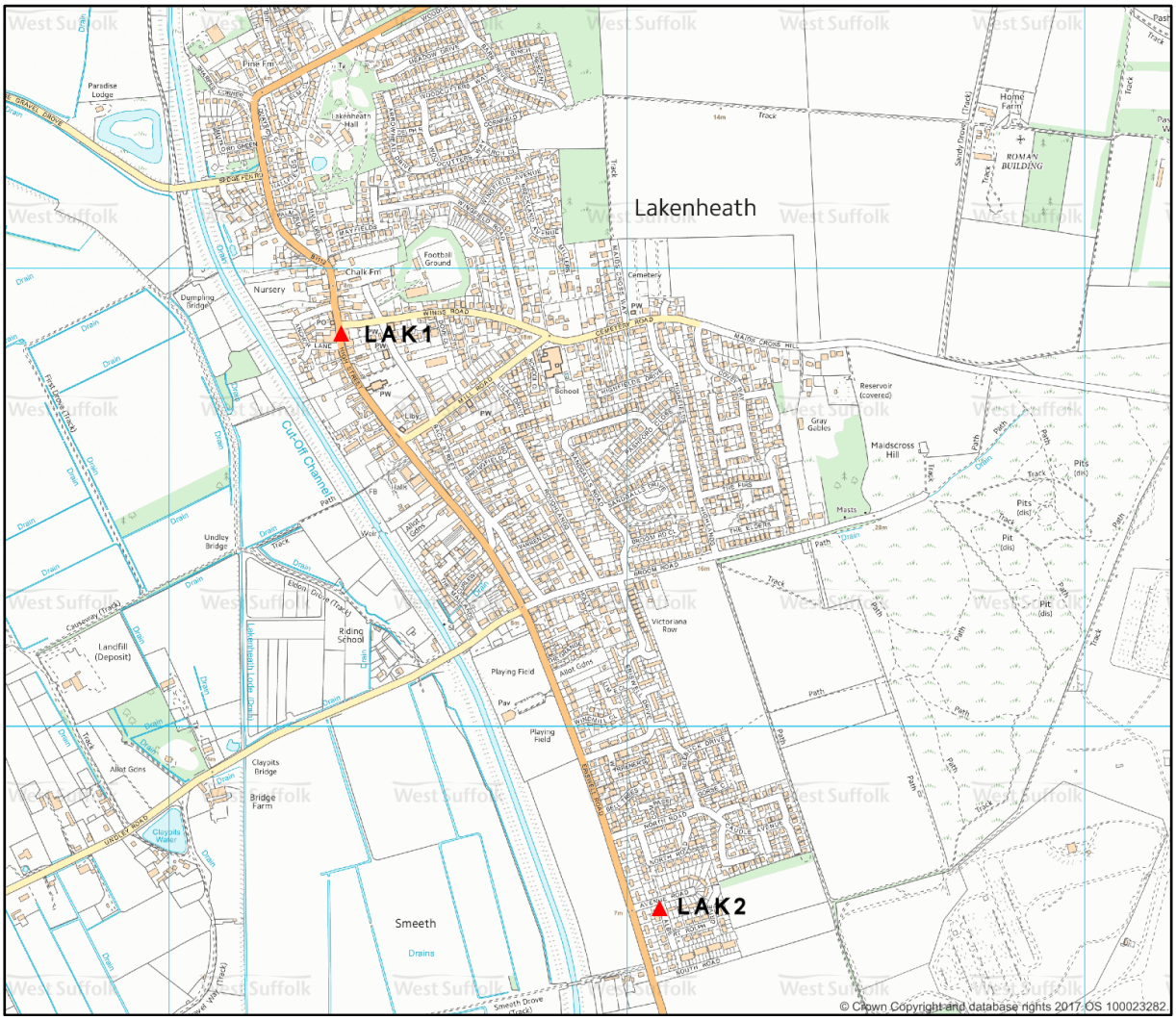
Location	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Unadjusted Average	Whole Year to analysed Ratio
BSE12	35.7		35.1	32.2	30		26	25.1		32.6		38.9	32.0	
BSE10	22.2		14.9	13.2	11.8		9.8	10.3		14.4		30.7	15.9	0.947
GB2	20.9		12	9.9	6.6		8.3	7.8		11.2		22.3	12.4	0.952
HH1	25.6		15.1	13.2	12.3		10.4	10.3		13.9		29	16.2	0.962
												Average Ratio		**0.954**

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

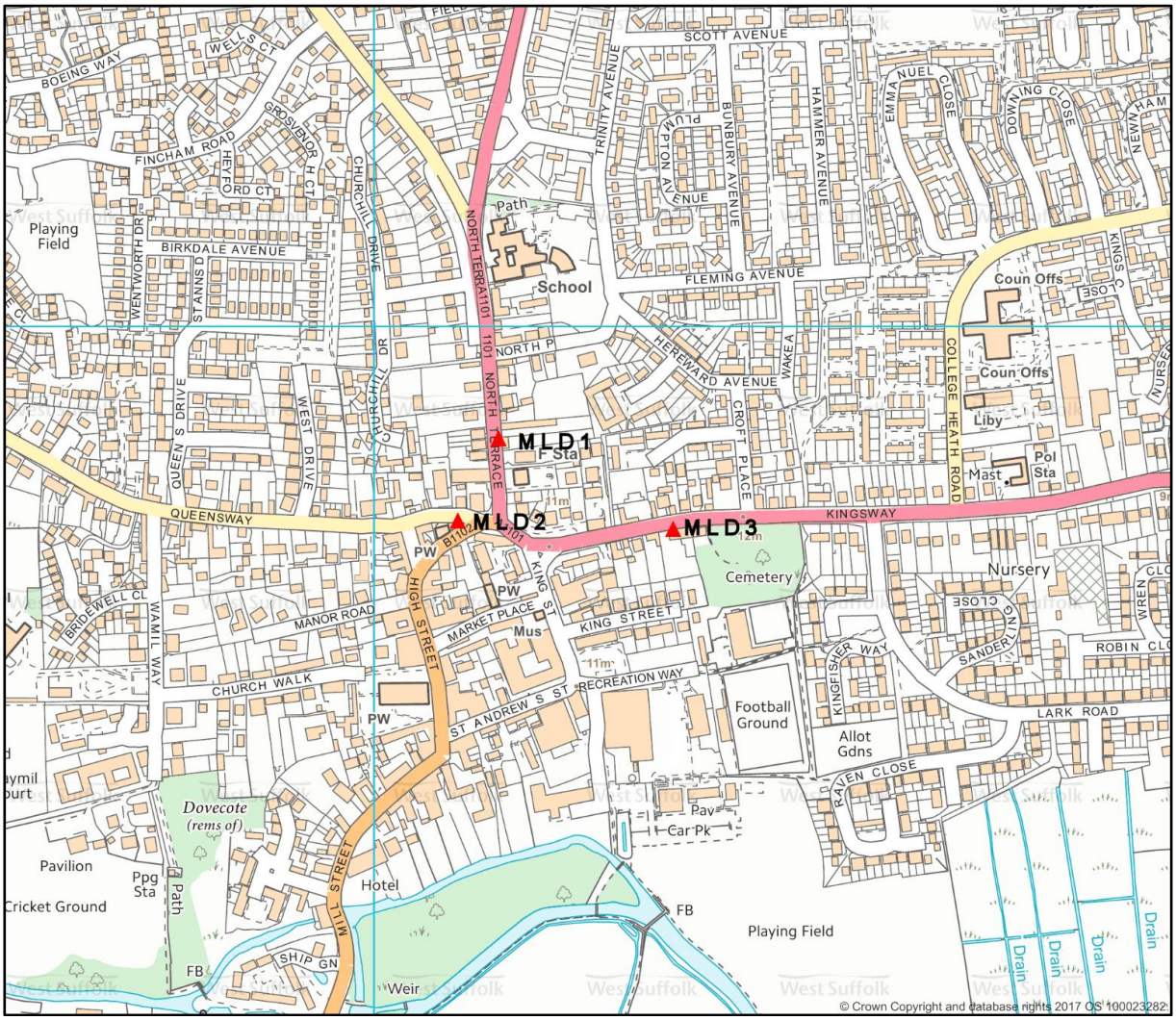
Brandon Diffusion Tube Locations



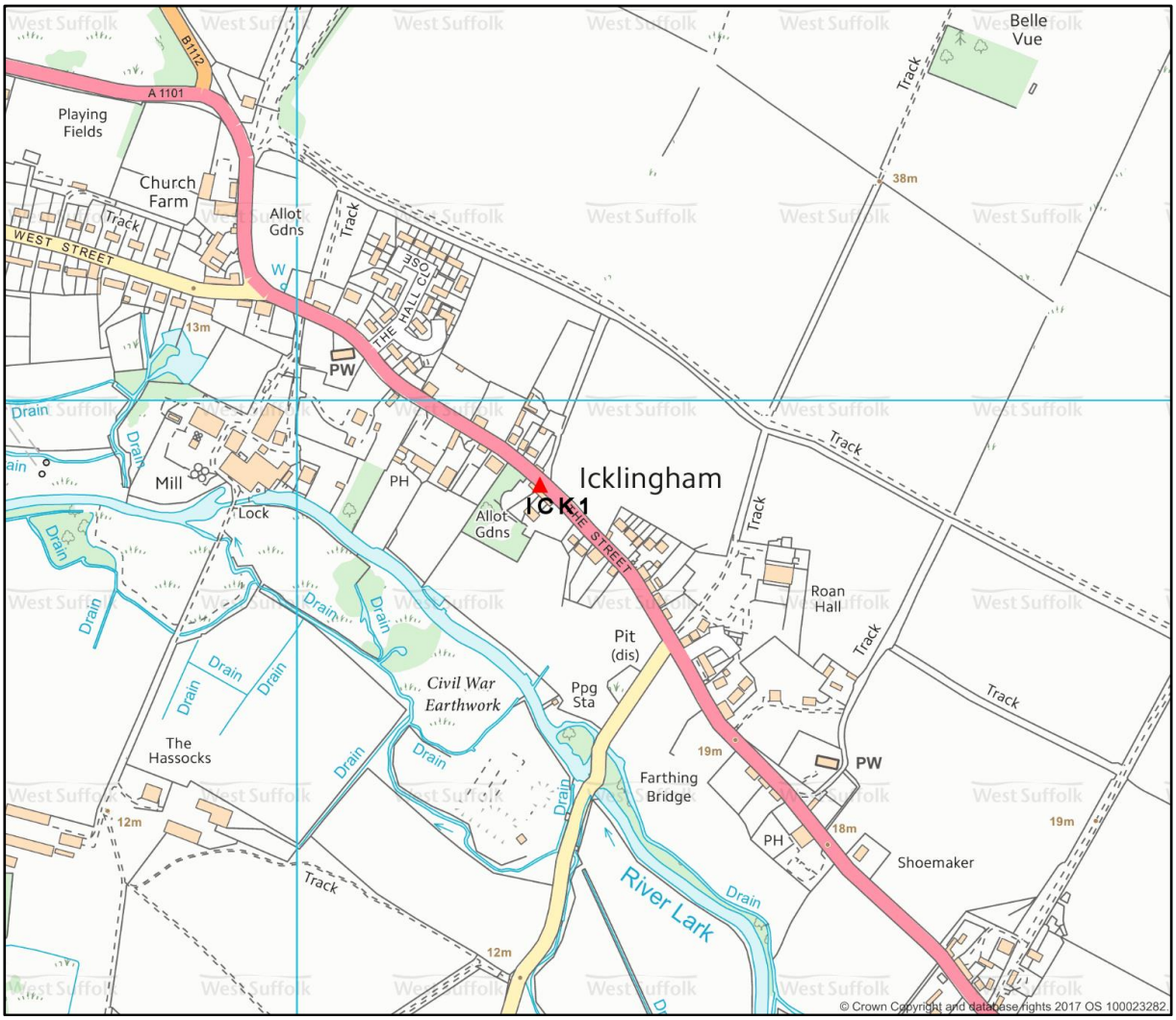
Lakenheath Diffusion Tube Locations



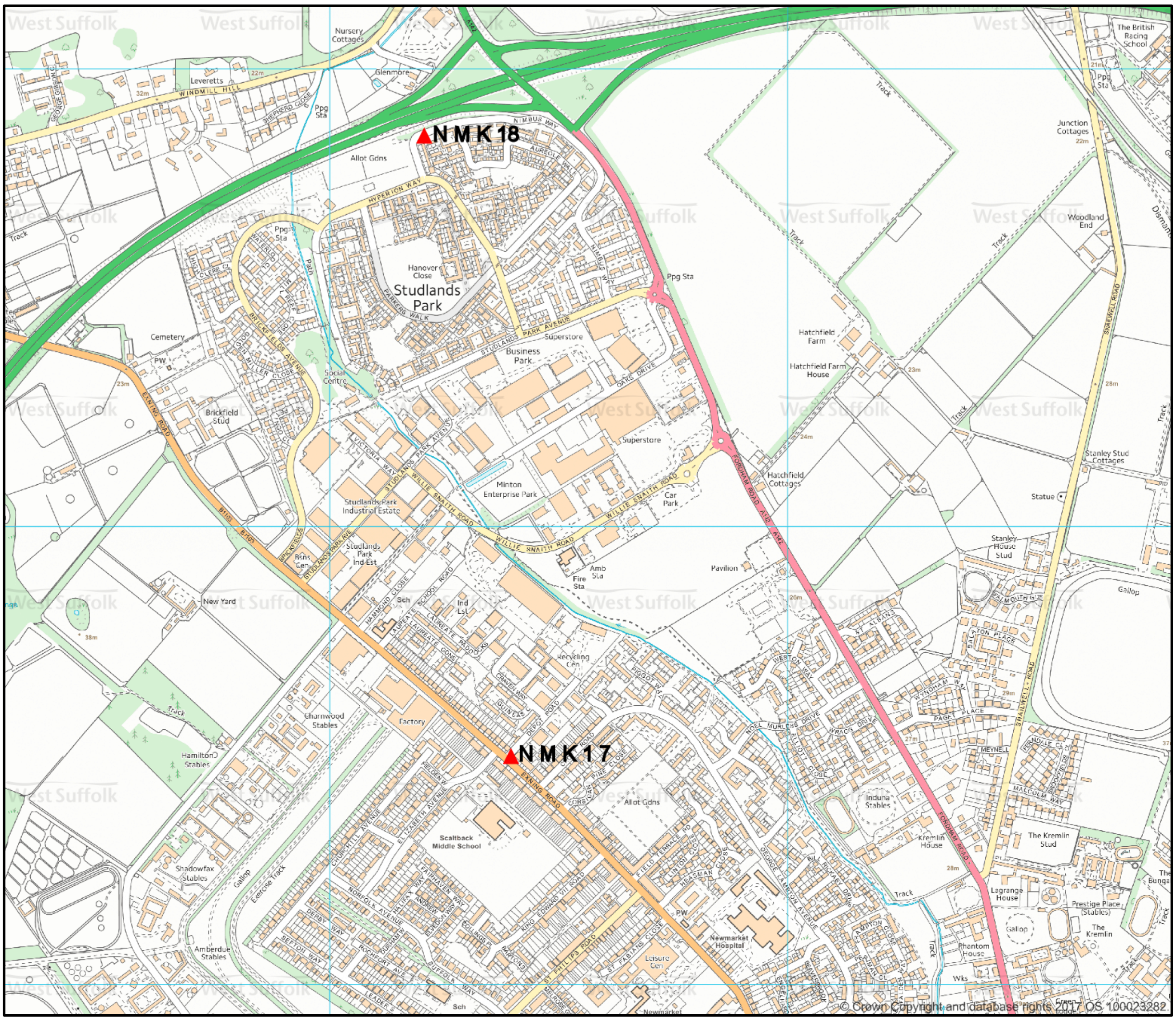
Mildenhall Diffusion Tube Locations



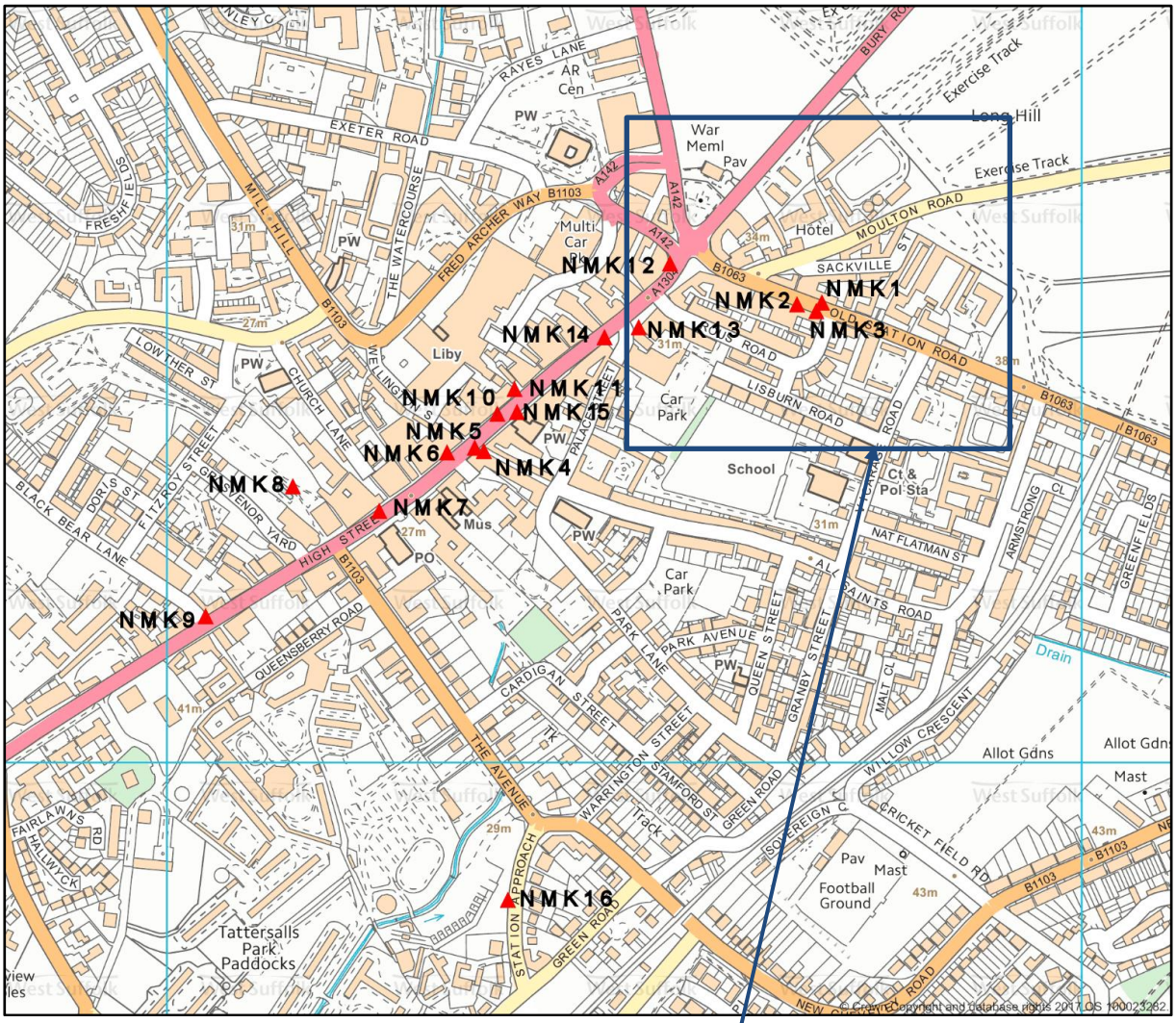
Icklingham Diffusion Tube Location



Newmarket (north) Diffusion Tube Locations

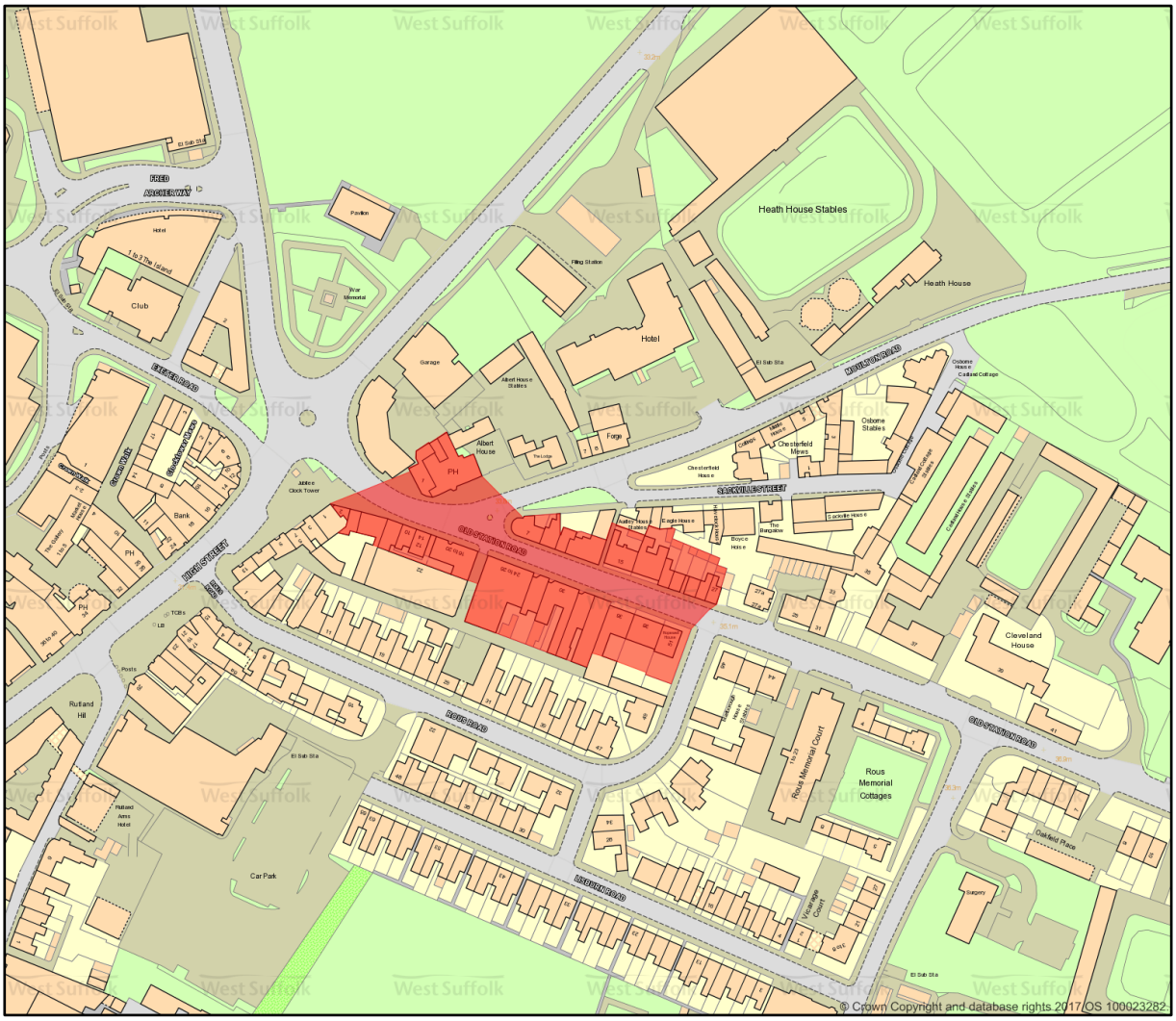


Newmarket (centre) Diffusion Tube Locations

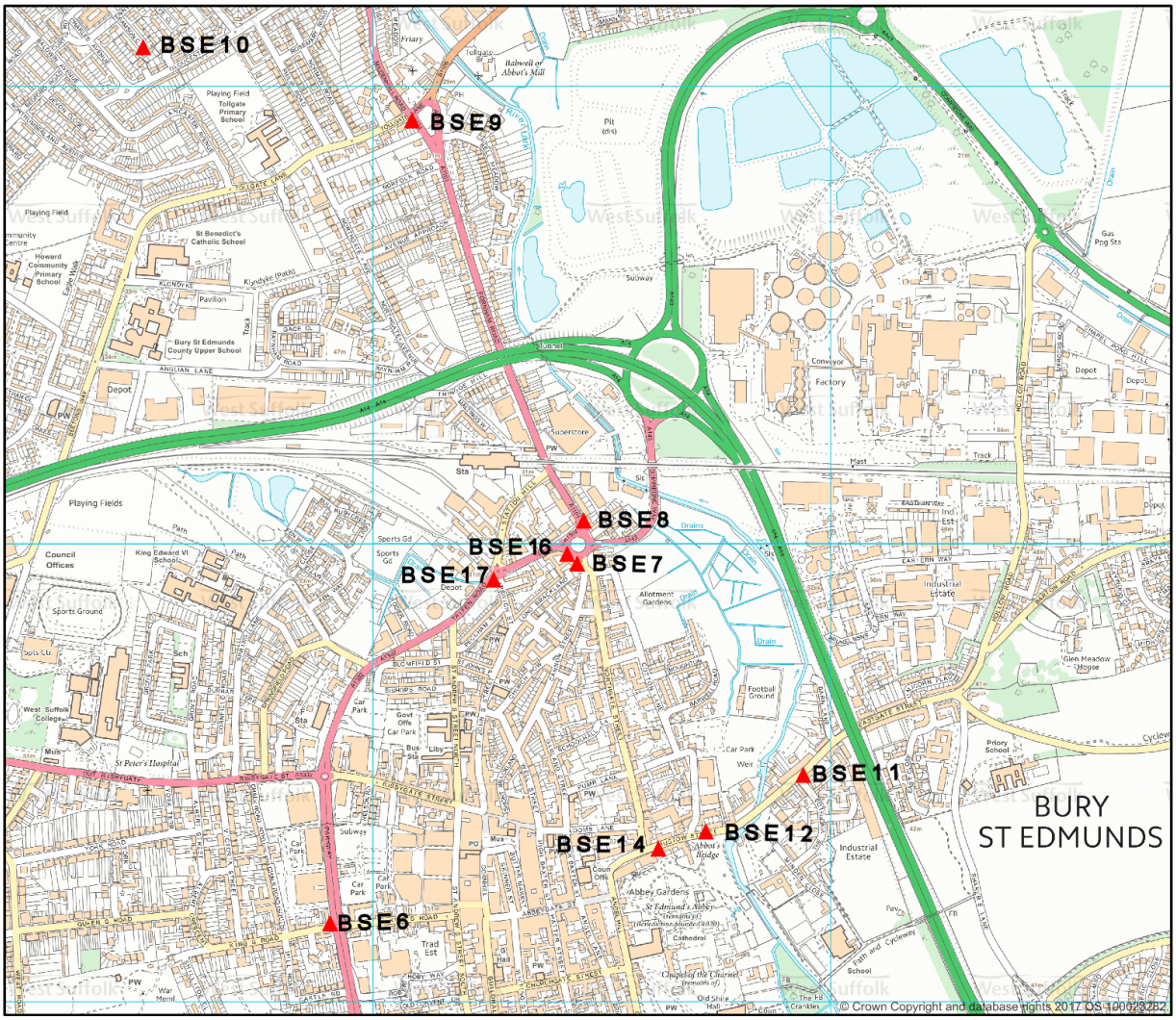


See Newmarket AQMA Location Plan (below)

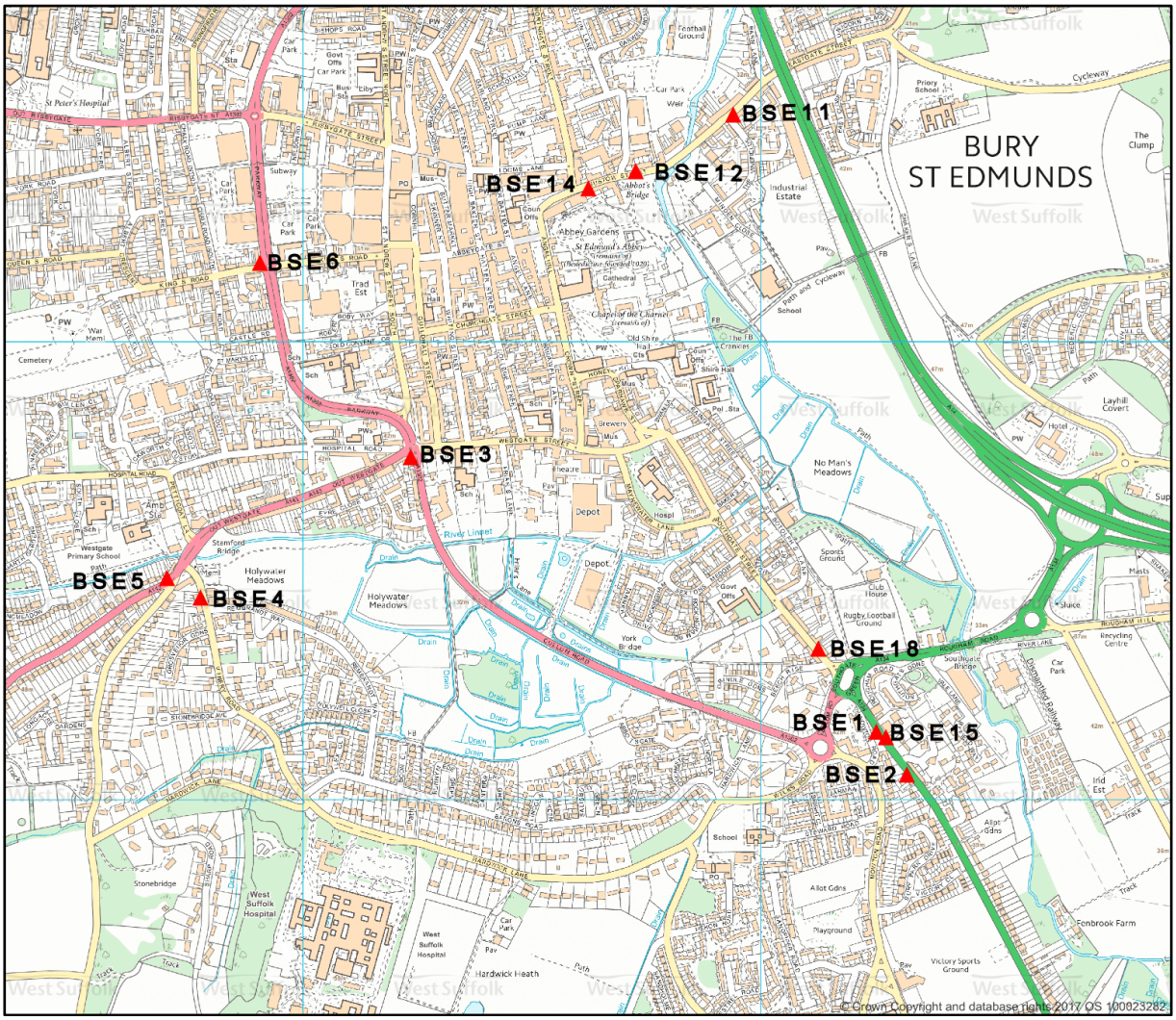
Newmarket AQMA Location



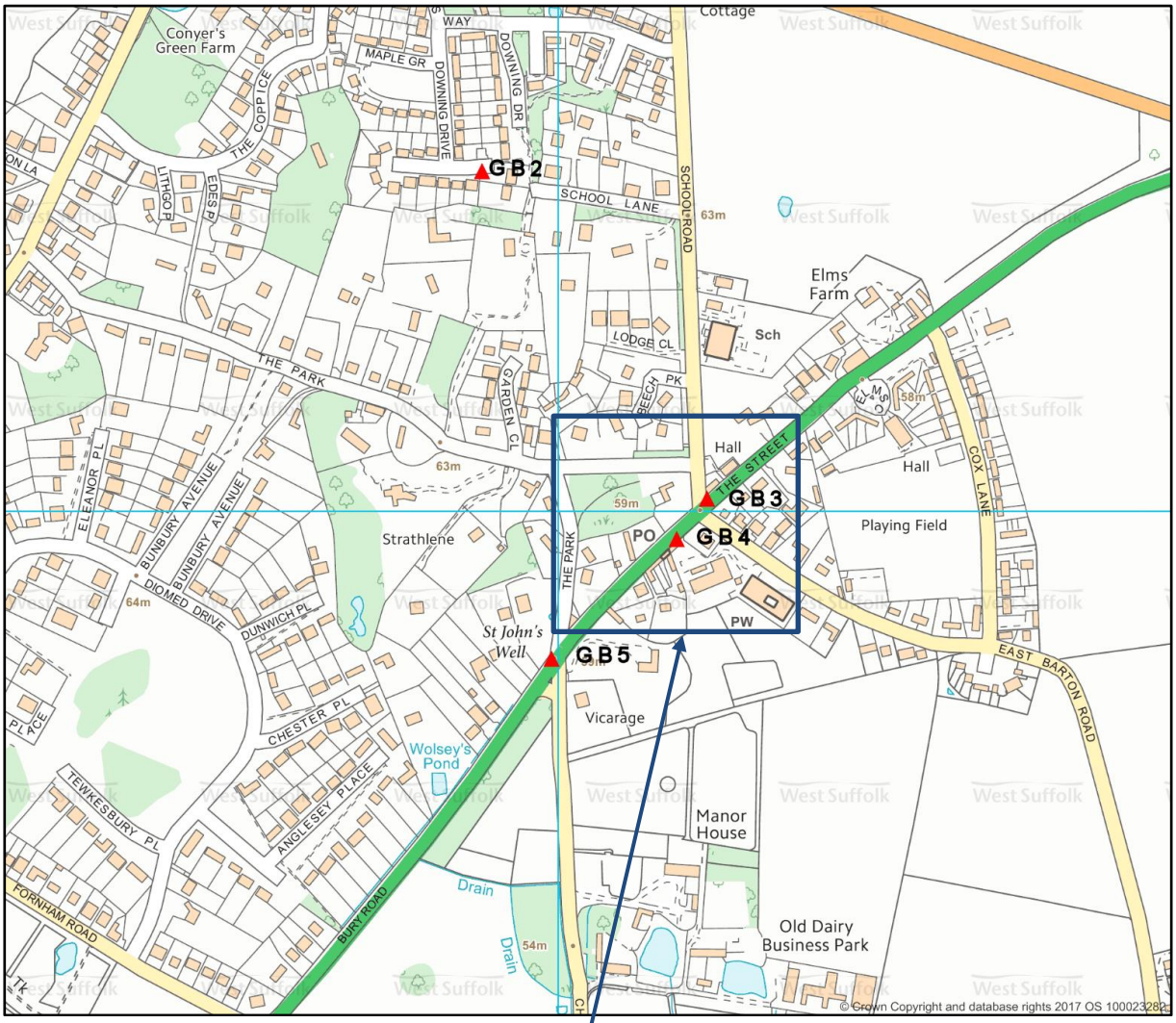
Bury St Edmunds (north) Diffusion Tube Locations



Bury St Edmunds (south) Diffusion Tube Locations



Great Barton Diffusion Tube Locations



See Great Barton AQMA Location Plan (below)

Great Barton AQMA Location

Haverhill Diffusion Tube 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/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
FHDC	Forest Heath District Council
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
SEBC	St Edmundsbury Borough Council
SO_2	Sulphur Dioxide