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Annual Status Report 2022

Bureau Veritas

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2022 Air Quality Annual Status Report (ASR)

In fulfilment of Part IV of the Environment Act 1995

Local Air Quality Management

Date: June 2022

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Executive Summary: Air Quality in Our Area

Air Quality in Boston Borough Council

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, the elderly, and those with existing heart and lung conditions. There is also often a strong correlation with equalities issues because areas with poor air quality are also often less affluent areas[1,2].

The mortality burden of air pollution within the UK is equivalent to 28,000 to 36,000 deaths at typical ages[3], with a total estimated healthcare cost to the NHS and social care of £157 million in 2017[4].

Boston's Air Quality issues stem from a high use of private vehicles for short and frequent trips within Boston and the major road networks. As with previous years, private motor vehicles trips that start and end in Boston account for nearly 50% of Boston's work commutes. The major arterial roads that run through Boston, including John Adams Way, Spilsby Road, Spalding Road and Sleaford Road are where these journeys are predominantly made causing peak period congestions.

Boston Borough Council (BBC) currently has two designated Air Quality Management Areas (AQMAs) located at Haven Bridge and Bargate Bridge (https://uk-air.defra.gov.uk/aqma/local-authorities?la_id=27), declared in 2001 and 2005 respectively. The two AQMAs have been declared in relation to exceedances of the AQS annual mean objective of 40 µg/m^3 for NO_2, largely due to traffic emissions from private vehicles along major arterial roads, which all connect to form the main transportation network within the

[1] Public Health England. Air Quality: A Briefing for Directors of Public Health, 2017

[2] Defra. Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006

[3] Defra. Air quality appraisal: damage cost guidance, July 2021

[4] Public Health England. Estimation of costs to the NHS and social care due to the health impacts of air pollution: summary report, May 2018

region. These high-capacity roads pass by residential areas where exposure is at its highest, thus raising public health concerns.

To outline the actions to be taken to improve air quality within the local authority, Boston Borough Council have recently revised its Air Quality Action Plan and introduced a new Air Quality Action Plan (AQAP) in 2020. This ASR also includes updates to measures within that action plan below.

Since the implementation of various measures to minimise the level of NO_2 concentrations within the AQMA's there has been an overall reduction in NO_2 concentrations within the Bargate Bridge AQMA. In recent years, NO_2 concentrations have consistently fallen below the AQS annual mean objective of 40 µg/m^3. It is considered that this is a result of a combination of the measures within the AQAP and the improvements in vehicle engines and fuels. As the AQO has been achieved for the last 4 years at the AQMA, BBC intend to revoke the Bargate Bridge AQMA. Boston Borough Council will continue monitoring in the AQMA to ensure that concentrations remain below the AQO.

Overall, during 2021, the mean annual NO_2 concentrations were typically slightly higher than those in 2020. The slight increase follows the trend in national 2021 increase in monitoring data due to the COVID-19 pandemic, 2020 monitoring data was considered reduced due to a reduction in road traffic emissions.

Actions to Improve Air Quality

Whilst air quality has improved significantly in recent decades and will continue to improve due to national policy decisions, there are some areas where local action is needed to improve air quality further.

The 2019 Clean Air Strategy[5] sets out the case for action, with goals to reduce exposure to harmful pollutants. The Road to Zero[6] sets out the approach to reduce exhaust emissions from road transport through a number of mechanisms; this is extremely important given that the majority of Air Quality Management Areas (AQMAs) are designated due to elevated concentrations heavily influenced by transport emissions.

[5] Defra. Clean Air Strategy, 2019

[6] DfT. The Road to Zero: Next steps towards cleaner road transport and delivering our Industrial Strategy, July 2018

In 2021, Boston Borough Council have implemented a range of measures to improve air pollution in the local authority, with a particular focus on NO_2. This can be seen with the implementation of the 2020 Air Quality Action Plan for Boston. Measures such as Boston Distributor Road and other improvements of transport links are underway, a Bus Services Improvement plan has been completed looking at electric buses and alternative fuels, planning policy has been updated to include policy wording on requirements of air quality assessments, implementation of construction management plans to manage dust emissions for large scale residential and commercial developments and many other measures. More of the larger scale measures are still underway or planned to begin in 2022 however the measures already implemented are improving NO_2 concentrations and this can be seen in the trend in NO_2 concentrations across the borough and the consistent reduction in NO_2 concentrations within the Bargate Bridge AQMA.

Conclusions and Priorities

During 2021, only one exceedance of the NO_2 annual mean objective was observed within the Haven Bridge AQMA. Only two other sites were within 10% of the annual mean air quality objective. This one exceedance demonstrates the continual improvement in NO_2 concentrations within Boston Borough Council. This consistent decline is not considered to be solely as a result of COVID-19 with most sites NO_2 concentrations decreasing since 2018. As such it is considered that there is sufficient consistent data to revoke the Bargate Bridge AQMA.

In recent years the levels of NO_2 within the Bargate Bridge AQMA have fallen and there is now consistent compliance with the AQS annual mean objective of 40 $\mu g/m^3$. As a result of the consistent compliance with the annual mean objective, the Council intend to revoke the Bargate Bridge AQMA. The Council will continue monitoring in the AQMA to ensure that concentrations remain below the AQO.

The measures within the AQAP and this ASR continue to focus on key priorities such as;

- Improve traffic flows and networks within Boston;
- Assessments of air quality and dust control standards to be implemented for new developments and construction sites;
- Encouragement of increased rail use, both for freight and passenger rail.
- Promoting low emission transport including electric vehicles

Local Engagement and How to get Involved

As transport is the main source of air pollution within Boston Borough Council, a good way for the public to contribute to improving air quality is to look less polluting travel options.

The following are suggested alternatives to private travel that are given within the AQAP measures that would contribute to improving the air quality within the Borough:

- Encouragement of electric vehicle use – The Council are increasing electric charging points across the Borough;
- Use of public transport – Facility improvements and investigations into the feasibility of the provision of lower emission buses are being carried out. This will help reduce pollutant concentrations through the reduction in the number of private vehicles and congestion; and
- Walk or cycle if your journey allows – Improvements to cycling infrastructure and promotion of alternative travel are taking place across the Borough. From choosing to walk or cycle, the number of vehicles is reduced and there is the added benefit of keeping fit and healthy.

Local Responsibilities and Commitment

This ASR was prepared by Bureau Veritas on behalf of the Environmental Health department of Boston Borough Council with the support and agreement of the following officers and departments:

Nick Davis – Principal Environmental Health Officer – Boston Borough Council

Tony Gray – Environmental Health Manager – Boston Borough Council

Christian Allen – Assistant Director – Regulatory

In addition, air quality is a standing item on the agenda of the Boston Transport Strategy Board who meet approximately 6 times per annum to discuss transport issues within Boston. This board is made of key officers and councillors across both Boston Borough Council and Lincolnshire County Council. The work of this board feeds into the ASR reporting and officers on this board have contributed in5 updating key actions within the AQAP.

The AQAP was developed though a working group of officers from across key departments within Boston BC, Lincolnshire County Council, Public Health. Consultation

was undertaken with the public and the developed AQAP was approved by council committee and cabinet.

If you have any comments on this ASR please send them to Nick Davis at:

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1 Local Air Quality Management

This report provides an overview of air quality Boston Borough Council during 2021. 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 Boston Borough Council to improve air quality and any progress that has been made.

The statutory air quality objectives applicable to LAQM in England are presented in Table E.1.

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 should prepare an Air Quality Action Plan (AQAP) within 12 months setting out measures it intends to put in place in pursuit of compliance with the objectives.

A summary of AQMAs declared by Boston Borough Council can be found in Table 2.1. The table presents a description of the two AQMAs that are currently designated within Boston Borough Council. Appendix D: Map(s) of Monitoring Locations and AQMAs provides maps of AQMAs and also the air quality monitoring locations in relation to the AQMAs. The air quality objectives pertinent to the current AQMA designations are as follows:

- Nitrogen Dioxide (NO_2) annual mean

Boston Borough Council intend to revoke the Bargate Bridge AQMA as, in recent years levels of NO_2 within this AQMA have fallen and there is now consistent compliance with the AQS annual mean objective of 40 µg/m^3.

As monitoring has now been below 40µg/m^3 for four years within the Bargate AQMA, it is considered that the effect of the Covid-19 pandemic is not solely responsible for the reduction of concentrations and so it is intended to revoke the AQMA. Table 2.1 and Table 2.2 below show monitored concentrations over the last 8 years within the areas of highest monitored concentrations.

It should be noted that during the first half of 2021, the UK was in its third lockdown with restrictions on movements and stay at home orders in place. Figure 2-1 below illustrates the monthly NO_2 monitoring results within the Bargate AQMA. These results demonstrate that despite the lockdowns and restrictions, monthly concentrations were fairly consistent in 2021, and as such it is therefore considered that 2021 monitoring data can be used to inform the decisions around revocation.

Figure 2-1 – NO_2 Monthly Monitoring Results within 2021 in Bargate AQMA

Table 2.1 – Monitored Annual Nitrogen Dioxide Levels within AQMA (µg/m³)

Site Description	2014	2015	2016	2017	2018	2019	2020	2021
Bargate Roundabout	34.2	31.1	31.1	31.3	32.5	31.3	25.3	27.4
30 Spilsby Road	**46.6**	**44.2**	**41.5**	**43.6**	39.4	37.0	29.9	31.9
20 Spilsby Road	**41.6**	36.6	36.7	37.1	37.8	35.8	27.2	28.9
23 Spilsby Road	31.7	28.5	28.2	27.7	27.9			
32 Spilsby Road	25.2	21.4	21.8	22.5	21.8			

Bold = above AQS; Underlines=within 10% of AQS;

Table 2.2 – Distance Correct Annual Nitrogen Dioxide Levels (µg/m³) at 20 & 30 Spilsby Road, Boston

Site Description	2014	2015	2016	2017	2018	2019	2020	2021
30 Spilsby Road 6m	38.0	36.2	34.2	35.8	32.7	30.9	27.0	28.7
20 Spilsby Road 5m	35.5	31.6	31.7	32.0	32.5	30.9	25.7	27.2

Bold = above AQS; Underlines=within 10% of AQS;

Table 2.1 – Declared Air Quality Management Areas

AQMA Name	Date of Declaration	Pollutants and Air Quality Objectives	One Line Description	Is air quality in the AQMA influenced by roads controlled by National Highways?	Level of Exceedance: Declaration	Level of Exceedance: Current Year	Name and Date of AQAP Publication	Web Link to AQAP
AQMA 1 - Haven Bridge	10/09/2001	NO_2 Annual Mean	A major highway consisting of John Adams Way (A16), Queen Street and Liquorpond Street (A52).	NO	44.7 µg/m³	44.6 µg/m³	Boston Borough Council, Air Quality Action Plan 2020	https://www.mybostonuk.com/wp-content/uploads/2020/08/Boston-Borough-Council-AQAP2020-Final-1.pdf
AQMA 2 - Bargate Bridge	01/03/2005	NO_2 Annual Mean	Key roundabout for the A16 and A1137.	NO	42.9 µg/m³	31.9 µg/m³	Boston Borough Council, Air Quality Action Plan 2020	https://www.mybostonuk.com/wp-content/uploads/2020/08/Boston-Borough-Council-AQAP2020-Final-1.pdf

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

☒ **Boston Borough Council confirm that all current AQAPs have been submitted to Defra.**

2.2 Progress and Impact of Measures to address Air Quality in Boston Borough Council

Defra's appraisal of last year's ASR concluded

1. *The Council have provided a good detailed discussion on NO_2 trends within the borough as well as the status and future action for each AQMA. The Council have provided sound justification for retaining Haven Bridge AQAP (due to continued exceedances) and plan to review the Bargate Bridge AQMA for potential revocation as it has demonstrated long term compliance with the AQOs. This is supported, however, because concentrations for 2020 are impacted by Covid-19, it would be reasonable to wait for a lockdown-free year to confirm the downwards trend in said AQMA.*

   Within the 2022, ASR the 2021 monitoring data continues to demonstrate that the AQOs are met at Bargate Bridge AQMA and as such the AQMA is intended to be revoked.

2. *The Council have presented NO_2 trends with respects to AQMA and areas outside of the AQMA. This is extremely useful as it allows the reader to easily understand spatial trends in NO2 within the borough. This approach to data/trend presentation is encouraged in future reports.*

   The 2022 ASR has continued to take this approach.

3. *The map is presenting one tube (2) that isn't in use anymore and needs to be removed.*

   This has been removed in this 2022 ASR

4. *Table A.2 has the same values inputted into the "Valid Data Capture for Monitoring Period" and the "Valid Data Capture 2020". As two months of monitoring couldn't be undertaken due to the pandemic, the "Valid Data Capture for Monitoring Period" should have been filled based on a 10 months monitoring period instead of 12. This should be amended in the next report if the same situation arises.*

   The 2022 ASR has amended the valid data capture for 2021 monitoring.

Boston Borough Council has taken forward a number of direct measures during the current reporting year of 2022 in pursuit of improving local air quality. Details of all

measures completed, in progress or planned are set out in Table 2.2. 20 measures are included within Table 2.2, with the type of measure and the progress Boston Borough Council have made during the reporting year of 2022 presented. Where there have been, or continue to be, barriers restricting the implementation of the measure, these are also presented within Table 2.2.

More detail on these measures can be found in their respective Action Plans, Boston Air Quality Action Plan 2020. Key completed measures are:

- Phase 1 of Boston Distributor Road completed as part of Quadrant development scheme linking A16 with B1397. Feasibility study of Quadrant stage 2 including link from B1397 to A52 has been undertaken by LCC with AMEY Consultants. A report has been compiled and shared with Boston Transport Strategy Members.
- A new Bus Services Improvement Plan (BSIP) has been completed in 2021 and work continues by LCC Transport Services to look at electric buses and use of alternative fuels with the major operators.
- As part of the council's town fund bid which has been successful, East Midlands Rail has proposed station enhancements to supplement the town funds intent to develop the transport interchange and "rail network to town centre" cycle routes. Work continues with LCC Economic development Team, Port of Boston, Network Rail regarding a new link access to port and to encourage more rail freight through the port. This would also reduce significant rail/road crossing down time at a number of rail crossings which lead to congestion in the Haven Bridge AQMA. Port of Boston currently moving 225,000 tonnes a year of freight by train which is equivalent to 18,000 HGV's a year all of which would pass through Haven Bridge AQMA.
- The South Lincolnshire Local Plan (2019) now includes a policy section on pollution with policy wording on requirements of Air Quality Assessments. It is expected this will have a minor effect on emissions.
- Implementation standards for dust and emissions from large construction sites – construction management plans (CMP) are now requested for larger developments both residential and commercial. These are to include dust control measures. CMP's are conditioned as part of planning consent process.
- Travel Plans are now requested for larger residential and commercial developments.

- The Environmental Health department at Boston Borough Council now act as a statutory consultee on all Part A1 permit applications, MPCD applications and certain permitted waste operations made to the EA. This ensures that appropriate screening has taken place as to not result in detrimental effects to the current AQMA's.

Boston Borough Council expects the following measures and priorities to be completed over the course of the next reporting year:

- Emission Standards for Taxis – Due to Covid-19 there has been a delay in internal meetings taking place with licencing teams and agreements reached on implementation which should be undertaken in 2022. It should be noted that is expected to have a minor reduction in emissions.
- Into town bus service increase patronage and service provision –The New Bus Services Improvement Plan has been completed, however due to COVID-19, passenger numbers are reduced, and bus operators have needed support from LCC/CG. Continue support and development expected in 2022. Following implementation, it is expected that this measure will result in moderate reduction in emissions.
- The New Local Transport Plan has been recently completed in 2022 with EV charging as a priority. This is expected to have a minor effect of emissions.
- Review and refresh of Boston Transport Strategy due to be completed in Spring 2022. This will include a list of projects to taken forward. New Marsh Lane roundabout to improve traffic flows and better freight access to industrial estate proposed for 2023 financed by the levelling up funded

Boston Borough Council worked to implement these measures in partnership with the following stakeholders during 2021:

- Midlands Direct
- East Midlands Rail
- Network Rail
- Port of Boston
- Lincolnshire County Council

The principal challenges and barriers to implementation and reasons for slow implementation and progress with measures that Boston Borough Council anticipates facing are;

- Receiving support and funding for larger schemes such as road schemes and installation of electric vehicle charging points.
- Effects of COVID-19 resulting in reduced number of public transport passenger numbers and additional funding.

Boston Borough Council anticipates that the measures stated above and in Table 2.2 will help to achieve compliance in AQMA 1 – Haven Bridge and continue to keep and further reduce pollutant concentrations below the AQO in AQMA 2 – Bargate Bridge.

Table 2.2 – Progress on Measures to Improve Air Quality

Measure No.	Measure	Category	Classification	Year Measure Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
1	Provision of Outer Distributor Road	Transport Planning and Infrastructure	Other	2018	2032	Lincolnshire County Council	DfT, Midlands Direct, LCC, Private sector	NO	Partially Funded	> £10 million	Implementation	Significantly reduce levels of HGV's achievement of annual target mean <40microgrammes /m3	Traffic count/non-automated monitoring	Phase 1 of Boston Distributor Road completed as part of Quadrant development scheme linking A16 with B1397. Feasibility study of Quadrant stage 2 including link from B1397 to A52 has been undertaken by LCC with AMEY Consultants. A report has been compiled and shared with Boston Transport Strategy Members.	Full distributor road scheme (bypass) requires support and funding of Midlands direct - not currently on their radar. DfT will not fund feasibility study directly despite local MP approach costs of which are otherwise prohibitive for LCC/BBC. Current phase 1 a delivered by private sector development
2	Improve Traffic Flows	Traffic Management	Strategic highway improvements, Re-prioritising Road space away from cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	2019	2024	Lincolnshire County Council	Lincolnshire County Council	NO	Partially Funded	£100k - £500k	Planning	Significant	Traffic count/non-automated monitoring	Review and refresh of Boston Transport Strategy due to be completed in Spring 2022. Will include a list of projects to taken forward. New Marsh Lane roundabout to improve traffic flows and better freight access to industrial estate proposed for 2023 financed by the levelling up funded	
3	Emission Standards for Taxis	Promoting Low Emission Transport	Taxi Licensing conditions	2019	2021	Boston Borough Council	Boston Borough Council	NO	Funded	< £10k	Implementation	Minor	NO2 levels around taxi ranks	Internal meetings taken place with Licensing team and agreement reached on implementation- delay caused by CV19	Part of full review of taxi licensing policy and therefore will need to go through council committee procedures
4	Encourage the use of electric vehicles by providing public charging points	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2019	2023	Boston Borough Council Lincolnshire County Council OLEV	External Grant funding	NO	Partially Funded	£50k - £100k	Implementation	Minor	Measure usage of local authority controlled EV points	23 EV charging points installed with major car parks operated by Boston BC with OLEV funding. Additional charging points for 8 other car park locations being considered under central Government grant scheme. Numerous Ev charging points achieved at commercial development through development control processes. WSP consultancy has been commissioned by LCC to develop a strategy to accelerate ULEV take up, assessing electric vehicle infrastructure requirement across the county and identify barriers which may slow the transition to electric vehicles. Boston BC met with WSP to input into the study the findings of which are expected late 2021. EV charging is a priority in the new Local Transport Plan V completed in 2022.	Major reliance on grant funding to install EV infrastructure. Poor grid capacity out of main town centre inhibitor to rapid charging.
5	Encourage electric charging facilities in new build homes and commercial premises through the development process	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2019	2023	Boston Borough Council	Boston Borough Council	NO	Funded	< £10k	Implementation	Minor	Monitor via planning enforcement of conditions requiring EV charging	Air Quality and mitigations now fully embedded in planning process via local plan and additional guidance to developers produced by Boston BC. Requirements for AQ mitigations, including the provision of EV charging now routinely required on planning applications for new residential and commercial developments. New Building Regulations - Part S comes	

Measure No.	Measure	Category	Classification	Year Measure Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
														into force as of 23 June 2022 requiring charging points under Building regs.	
6	Into town bus service - increase patronage/ service provision	Alternatives to private vehicle use	Other	2019	2022	Lincolnshire county Council	Lincolnshire County Council	NO	Not Funded	£100k - £500k	Planning	Moderate	Increase public transport use	Boston Transport Strategy Group to look at review of into town bus services in terms of timings and routes including if they can extend to main employment areas. All bus stops now include code than can be texted to get real time next bus information. A new Bus Services Improvement Plan (BSIP) has been completed in 2021	Covid pandemic has severely affected passenger numbers and therefore most routes and bus operators have had to be support by LCC/CG just to survive. Needs support and cooperation of bus operators.
7	Investigate the provision of cleaner buses for into town services (other bus routes)	Alternatives to private vehicle use	Other	2019	2024	Lincolnshire County Council /WSP consultancy	Lincolnshire County Council/Grant Funding for CG	NO	Not Funded	£1 million - £10 million	Planning	Minor	Low emission bus procurement/routes	WSP commissioned by LCC to look at whether certain bus routes across Lincolnshire lend themselves to alternatively fuelled buses. Included within the 30 routes shortlisted for study include 10 that service Boston including the 'into town' services. Major local bus provider in Boston part of study and actively involved. A new Bus Services Improvement Plan (BSIP) has been completed in 2021 and work continues by LCC Transport Services to look at electric buses and use of alternative fuels with the major operators.	Needs cooperation of existing bus operators and likely external funding sources to move to alternative fuels.
8	Request air quality assessments for developments that are likely to have significant impact on air quality	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2019	2020	Boston Borough Council	Boston BC	NO	Funded	< £10k	Completed	Minor	Obtain the additional AQ information and report on any impacts in ASR	Requirements embedded in South Lincolnshire Local Plan - Air Quality guidance based around national guidance produced for developer and provided on website.	
9	Investigate reduced car parking charges for EV/Hybrid vehicles in LA car parks and priority parking for such vehicles	Promoting Low Emission Transport	Priority parking for LEV's	2019	2020	Boston Borough Council	Boston BC	NO	Not Funded	£100k - £500k	Aborted	Minor	N/A	New EV charging point provided with dedicated space for EV only. EV charging is a priority in the new Local Transport Plan V completed in 2022.	Loss of vital revenue to local authority through loss of car parking income.
10	Promote cycling and walking as an alternative to cars	Promoting Travel Alternatives	Promotion of cycling	2019	2023	Lincolnshire County Council/Boston Borough Council	Lincolnshire County Council	NO	Partially Funded	£100k - £500k	Implementation	Minor	Increase numbers of participants / traffic counts	The Boston Transport Strategy proposes a number of measures to promote cycling. A refresh of Boston Transport Strategy due to be completed in Spring 2022. Will include a list of projects to taken forward. A new Cycling and Walking Plan has also been completed by LCC. In addition, all schools in the Boston area now have an approved School Travel Plans to encourage walking, cycling and bus use. New	

Measure No.	Measure	Category	Classification	Year Measure Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
														active travel scheme on London Road, Marsh Lane & Wyberton Low Road linking and building on existing provision. Funded through the levelling up fund	
11	Encourage low emission vehicles in the wider community	Promoting Low Emission Transport	Other	2019	2023	Boston Borough Council	Boston Borough Council	NO	Funded	£10k - 50k	Implementation	Moderate	Traffic counts/non automated monitoring	Actively requires EV charging through planning process. Provision of EV charging in council car parks. Promotes EV and ULEV's on its website with links to GO ULTRA LOW and OLEV grant funding schemes. New Building Regulations - Part S comes into force as of 23 June 2022 requiring charging points under Building regs.	
12	Implement standards for dust and emissions from large constructio n sites	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2019	2021	Boston Borough Council	Boston Borough Council	NO	Funded	< £10k	Completed	Minor	Number of complaints regarding construction/ demolition activities	Construction management plans now routinely requested for larger developments both residential and commercial. These must include dust control measures. Construction Management Plans conditioned as part of planning consent process. Guidance to developers produced and available on council's website. Also request method statements for demotion notices through Building Control. Complaints (very few) promptly investigated.	
13	Promote travel plans for new developme nts	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2019	2019	Boston Borough Council/Lincoln shire County Council	Boston Borough Council	NO	Funded	< £10k	Completed	Minor	Air Quality assessments, conclusions, and data	Travel plans now routinely requested for larger developments both residential and commercial.	
14	Liaise with EA in respect of industrial emissions from permitted sites to ensure AQMAs considered when setting emission standards	Environment al Permits	Measures to reduce pollution through IPPC Permits going beyond BAT	2019	2019	Boston Borough Council	Boston Borough Council	NO	Funded	< £10k	Completed	Negligible	100% response rate to consultations received	Environmental Health at BBC acts as a statutory consultee on all Part A1 permit applications, MCPD applications and certain permitted waste operations made to the agency. BBC ensures all appropriate screening has taken place with regards to emissions to air and that no detriment to current AQMA's. Stricter emission targets requested in such event.	
15	Promote green waste services and discourage use of bonfires for disposal of waste at domestic and commercia l sites	Public Information	Via the Internet	2019	2019	Boston Borough Council	Boston Borough Council	NO	Funded	< £10k	Completed	Negligible	tonnage green waste collected/formal actions on waste related burning	Regularly publicity around the garden waste collection service - this year 12k signed up for garden waste collections. A proportion of this waste would have been burned on garden fires causing localised nuisance and contributing to poor air quality. Robust enforcement of complaints regarding burning and promotion of greener alternatives for disposal of green wastes	Support Boston BC climate change agenda
16	Investigate the use of council	Promoting Low	Other Policy	2019	2023	Boston Borough Council	Boston Borough Council	NO	Partially Funded	£500k - £1 million	Implementation	Negligible	Number of low emission vehicles procured	Council is small and therefore fleet vehicle numbers small however this	Additional costs of procurement

Measure No.	Measure	Category	Classification	Year Measure Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
	procurement procedures as a tool to encourage greener transport services	Emission Plant												year replace street sweeper, 7 refuse collection vehicles and tractor all of which are Euro 6 compliant. More work to be done in respect of this measure.	
17	Provision of AQ information to the public	Public Information	Via the Internet	2019	2020	Boston Borough Council	Boston Borough Council	NO	Funded	< £10k	Implementation	Negligible	Webpage views	Implemented in part with dedicated webpages on AQ and transport related issues	Look to rationalise all AQ information to one page
18	Work with operators to increase the use of rail freight/shipping and passenger services	Alternatives to private vehicle use	Other	2019	2024	Lincolnshire County Council/Boston Borough Council/East Midlands Rail	Boston Borough Council/Lincolnshire Country Council/Port of Boston/Network Rail	NO	Partially Funded	> £10 million	Planning	Moderate	Rail passenger figures / Tonnage of freight moved by rail	As part of the council's town fund bid which has been successful East Midlands rail has proposed station enhancements to supplement the town funds intent to a transport interchange and rail to town centre cycle routes. Work continues with LCC Economic development Team, Port of Boston, Network Rail regarding a new link access to port and to encourage more rail freight through the port. This would also reduce significant rail/road crossing down time at a number of rail crossings which lead to congestion in the Haven Bridge AQMA. Port of Boston currently moving 225 000 tonnes a year of freight by train which is equivalent to 18000 HGV's a year all of which would pass through Haven Bridge AQMA.	
19	Workplace lift sharing scheme	Promoting Travel Alternatives	Workplace Travel Planning	2019	2023	Lincolnshire County Council Public Health/Boston Borough Council	Boston Borough Council	NO	Not Funded	< £10k	Aborted	Negligible	Number of car users/levels of revenue from parking	Liaison with Public Health at LCC commenced but has not progressed at this time due to Covid 19 - car sharing did not lend itself to car sharing during pandemic. There are national schemes that could be promoted in future across Boston and wider Lincolnshire - may be revisited in future.	Currently aborted but may revisit during life of AQAP.
20	Promote good fleet management, fuel efficiency and new technologies with local LGV/HGV business operators	Promoting Low Emission Transport	Other	2019	2022	Boston Borough Council	Boston Borough Council	NO	Funded	< £10k	Implementation	Negligible		Promotion of the Energy Savings Trust free guidance and assistance to fleet operators and eco driving schemes. Circular letter and information sent out to local fleet operators in September 2020 - positive response by some larger operators who advised they would be following up with energy saving trust to see their offer.	No realistic options for low emission zones due to one major bridge crossing of river Haven that divides town north to south. All main routes cross this bridge no alternative routes available. Therefore, limited to promotion of good fleet management.

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

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

The current Defra 2021 background maps for Boston Borough Council (2018 based[7]) show that all background concentrations of $PM_{2.5}$ are well below the annual mean objective for $PM_{2.5}$. The highest concentration is 9.4µg/m^3 within the 1km x 1km grid square with the centroid grid reference of 532500, 343500.

The Public Health Outcomes Framework data tool[8] compiled by Public Heath England (PHE) quantifies the mortality burden of $PM_{2.5}$ within England on a county and local authority scale. The 2020 fraction of mortality attributable to $PM_{2.5}$ pollution across England is 5.6%. Boston is slightly lower at 5.2% which is the same as the East Midlands region average.

Boston Borough Council see the majority of measures tackling road traffic source emissions to address $PM_{2.5}$, these include:

- Provision of Outer Distributor Roads to reduce levels of HGV's
- Encourage use of Electric Vehicles by providing public charging points
- Promote cycling and walking through Boston Transport Strategy.
- Implementing dust standards for large construction sites, and many other additional measures. Most measures to improve $PM_{2.5}$ will be through the Lincolnshire County Council as well as Boston Borough Council.

[7] Defra Background Mapping data for local authorities (2018-based), available online a: https://uk-air.defra.gov.uk/data/laqm-background-maps?year=2018

[8] Public Health Outcomes Framework, Public Health England. data tool available online at: https://fingertips.phe.org.uk/profile/public-health-outcomes-framework/data#page/0/gid/1000043/pat/6/par/E12000004/ati/401/iid/30101/age/230/sex/4/cid/4/tbm/1

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

This section sets out the monitoring undertaken within 2021 by Boston Borough Council and how it compares with the relevant air quality objectives. In addition, monitoring results are presented for a five-year period between 2017 and 2021 to allow monitoring trends to be identified and discussed.

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

No automatic (continuous) monitoring was carried out by Boston Borough Council.

3.1.2 Non-Automatic Monitoring Sites

Boston Borough Council undertook non- automatic (i.e. passive) monitoring of NO_2 at 15 sites during 2021. Table A.1 in Appendix A presents the details of the non-automatic sites.

Maps showing the location of the monitoring sites are provided in Appendix D 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, annualisation (where the annual mean data capture is below 75% and greater than 25%), and distance correction. Further details on adjustments are provided in Appendix C.

3.2.1 Nitrogen Dioxide (NO_2)

Table A.2 in Appendix A compares the ratified and adjusted monitored NO_2 annual mean concentrations for the past five years with the air quality objective of 40µg/m^3. Note that the concentration data presented represents the concentration at the location of the

monitoring site, following the application of bias adjustment and annualisation, as required (i.e. the values are exclusive of any consideration to fall-off with distance adjustment).

For diffusion tubes, the full 2021 dataset of monthly mean values is provided in Appendix B. Note that the concentration data presented in Table B.1 includes distance corrected values, only where relevant.

During 2021 only monitoring site 1 (located within Haven Bridge AQMA) exceeded the annual mean objective for NO_2. Monitoring location 3 and 20 are also located within the Haven Bridge AQMA and monitored an annual mean concentration within 10% of the annual mean objective. None of the other 12 sites monitored annual mean concentrations within 10% of the annual mean objective. As there have been no exceedances of the NO_2 annual mean objective within the Bargate Bridge AQMA for 4 years, Boston Borough Council intend to revoke the AQMA, however monitoring within the Bargate Bridge AQMA will continue. 1-hour NO_2 mean concentrations were not measured, however no exceedances were predicted as the annual mean concentrations are all below <60 µg/m^3.

Appendix A: Monitoring Results

Table A.1 – Details of Non-Automatic Monitoring Sites

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
1	Adjacent to new air quality monitoring station, North side of Haven Bridge Road	Roadside	532575	343696	NO2	Haven Bridge	0.0	1.5	NO	3.0
3	Adjacent to 68 Liquorpond Street	Roadside	532470	343736	NO2	Haven Bridge	0.1	0.5	NO	3.0
4	Adjacent to 18 Queen Street	Roadside	532331	343848	NO2	Haven Bridge	0.1	1.5	NO	3.0
5	John Adams Way intersection with Haven Bridge	Roadside	532859	343760	NO2	Haven Bridge	3.5	2.2	NO	3.0
8	Bargate Roundabout	Roadside	533112	344476	NO2	Bargate	0.0	2.3	NO	3.0
9	Roadside adjacent to 30 Spilsby Road	Roadside	533251	344642	NO2	Bargate	4.0	2.0	NO	3.0
12	Junction of New Asda Road and Sleaford Road, Boston	Roadside	532168	343987	NO2	No	8.9	1.5	NO	3.0
14	Roadside adjacent to 20 Spilsby Road	Roadside	533226	344624	NO2	Bargate	3.0	2.0	NO	3.0
16	Entrance to South Quay Car Park	Roadside	532855	343719	NO2	No	0.0	2.0	NO	3.0
17	Opposite 4-6 South End, Boston	Roadside	532877	343690	NO2	No	0.0	2.0	NO	3.0
18	ATS Roundabout, London Road, Boston	Roadside	532600	342737	NO2	No	0.0	2.0	NO	3.0

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
19	Opposite 55 London Road, Boston	Roadside	532630	342760	NO2	No	0.0	2.0	NO	3.0
20	Kerbside, Haven Bridge	Roadside	532744	343719	NO2	Haven Bridge	16.0	2.0	NO	3.0
21	36 Sleaford Road, Boston	Roadside	532024	344060	NO2	No	8.0	1.5	NO	3.0
22	Adjacent to 94 Liquorpond Street	Roadside	532547	343697	NO2	Haven Bridge	0.1	8.0	NO	2.3

Notes:

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

(2) N/A if not applicable.

Table A.2 – Annual Mean NO_2 Monitoring Results: Non-Automatic Monitoring (µg/m^3)

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2021 (%) [2]	2017	2018	2019	2020	2021
1	532575	343696	Roadside	100	100.0	**49.4**	**42.4**	**49.2**	**42.1**	**44.6**
3	532470	343736	Roadside	90.4	90.4	**53.2**	**48.3**	**46.5**	35.2	39.3
4	532331	343848	Roadside	100	100.0	38.0	39.4	39.8	29.4	33.4
5	532859	343760	Roadside	100	100.0	36.8	34.7	34.8	27.6	27.4
8	533112	344476	Roadside	100	100.0	31.3	32.5	31.3	25.3	27.4
9	533251	344642	Roadside	100	100.0	**43.6**	39.4	37.0	29.9	31.9
12	532168	343987	Roadside	100	100.0	27.6	31.8	28.9	20.4	26.4
14	533226	344624	Roadside	100	100.0	37.1	37.8	35.8	27.2	28.9
16	532855	343719	Roadside	100	100.0	-	-	30.1	24.8	26.4
17	532877	343690	Roadside	92.3	92.3	-	-	30.5	24.2	26.4
18	532600	342737	Roadside	100	100.0	-	-	33.8	28.3	29.0
19	532630	342760	Roadside	100	100.0	-	-	27.5	22.9	22.6
20	532744	343719	Roadside	100	100.0	-	**46.3**	**41.6**	34.0	37.6
21	532024	344060	Roadside	100	100.0	-	30.0	29.0	23.7	24.7
22	532547	343697	Roadside	57.7	57.7	-	-	35.9	26.6	28.2

☒ **Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG16**

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

☒ **Reported concentrations are those at the location of the monitoring site (bias adjusted and annualised, as required), i.e. prior to any fall-off with distance correction.**

Notes:

The annual mean concentrations are presented as µg/m^3.

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**.

Means for diffusion tubes have been corrected for bias. All means have been "annualised" as per LAQM.TG16 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

Concentrations are those at the location of monitoring and not those following any fall-off with distance adjustment.

(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%).

Figure A.1 – Trends in Annual Mean NO_2 Concentrations

Figure A-1 – NO_2 Annual Mean Monitoring Trends within Haven Bridge AQMA

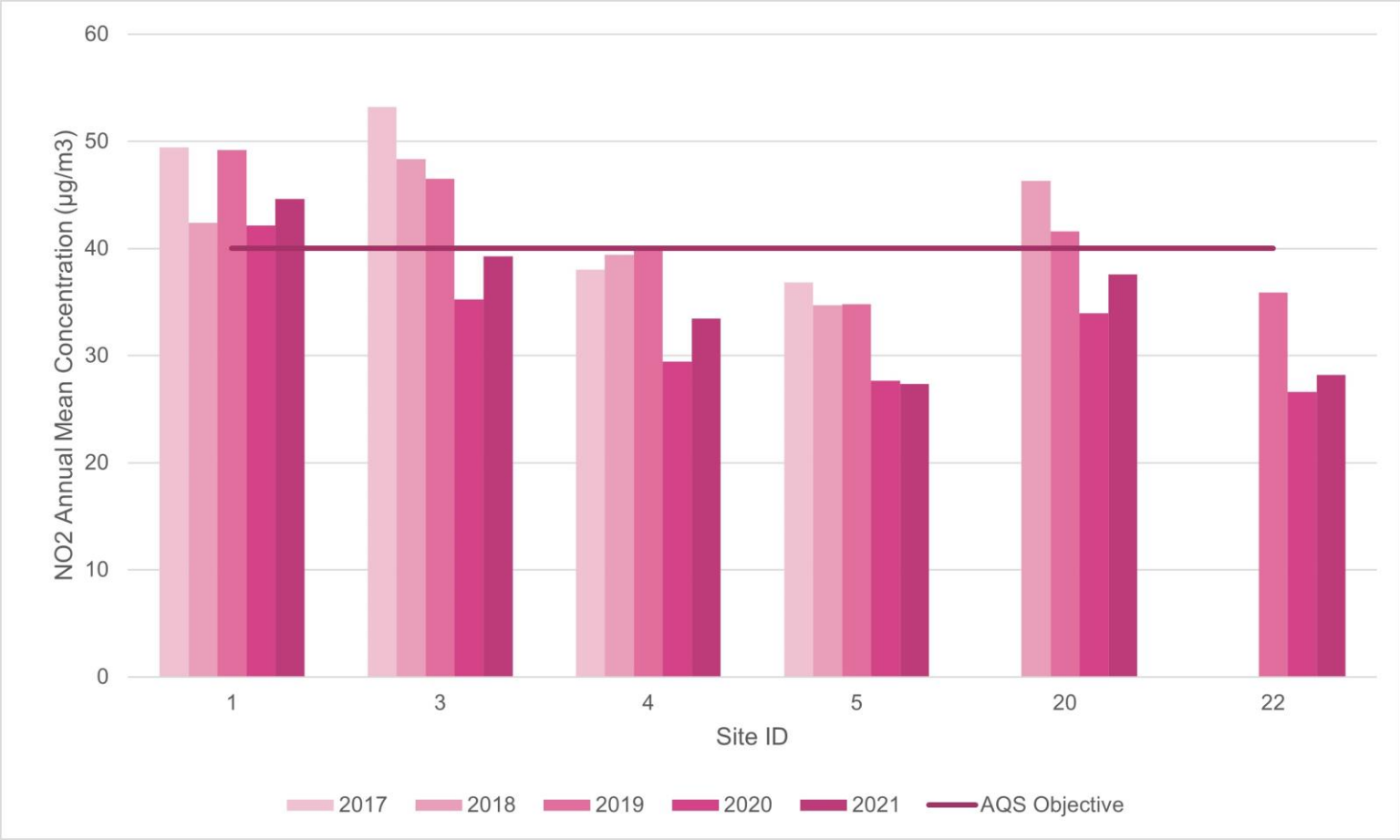


Figure A-2 - NO_2 Annual Mean Monitoring Trends within Bargate Bridge AQMA

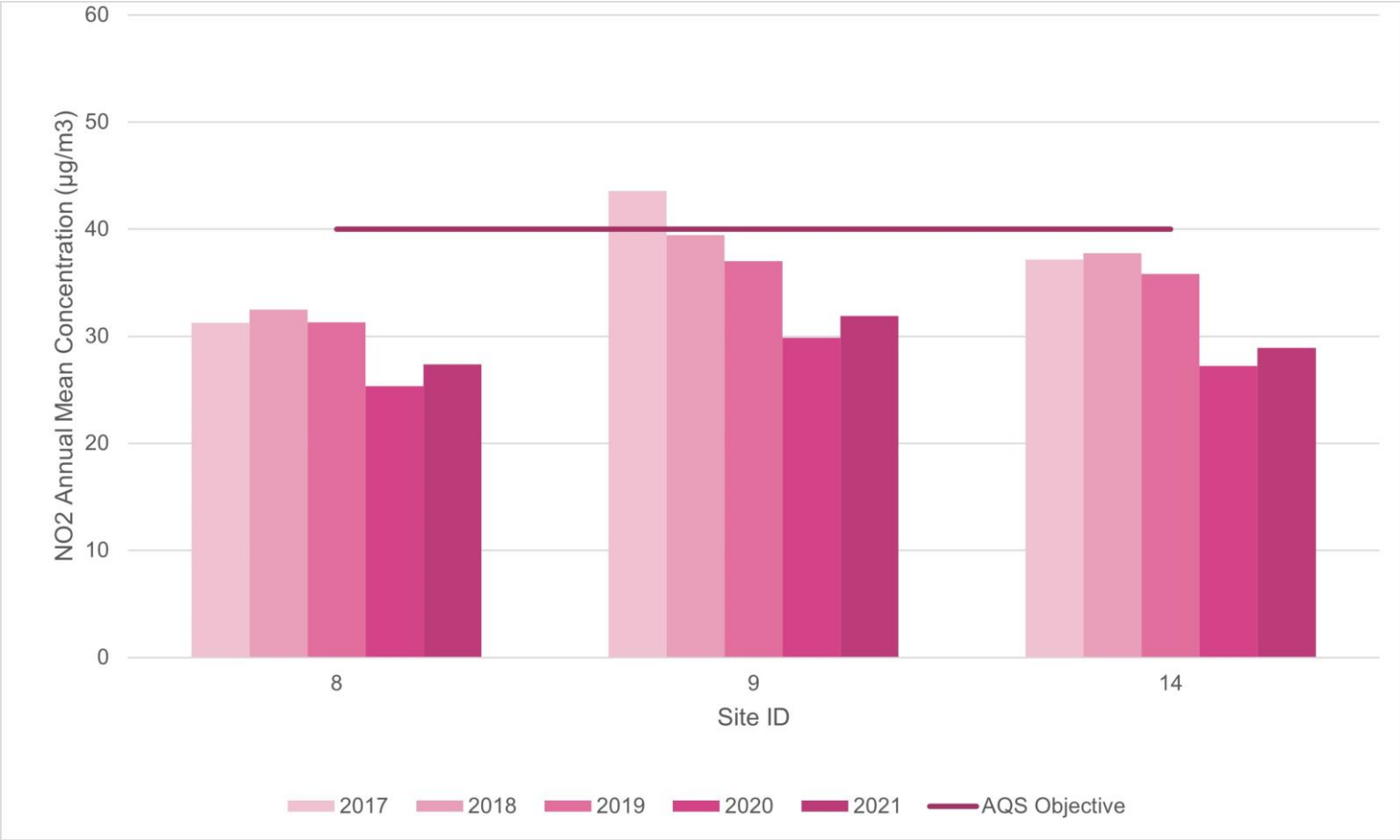
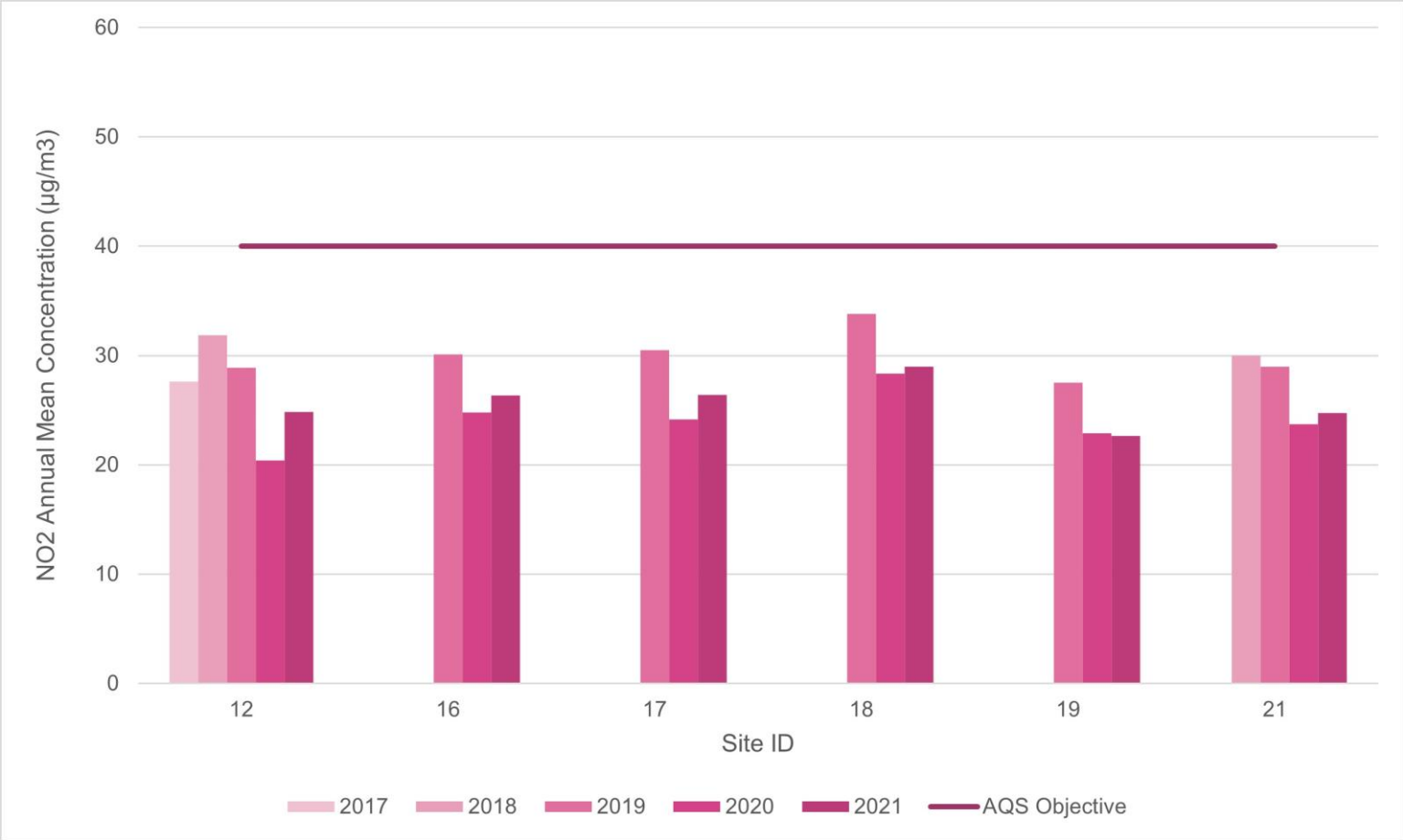


Figure A-3 - NO_2 Annual Mean Monitoring Trends at Monitoring Locations Outside of AQMA



Appendix B: Full Monthly Diffusion Tube Results for 2021

Table B.1 – NO_2 2021 Diffusion Tube Results (µg/m^3)

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Easting)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.84)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
1	532575	343696	59.9	48.1	57.6	48.0	53.9	52.0	53.5	46.5	66.3	51.2	55.4	45.4	53.2	**44.6**		
3	532470	343736	54.6	46.7	52.8	37.9	47.4	46.1	42.8	37.6	49.6	49.2	49.8	-	46.8	39.3	38.4	Predicted concentration at Receptor within 10% the AQS objective.
4	532331	343848	42.7	45.5	34.8	43.5	43.4	39.5	42.9	31.5	49.4	34.4	35.3	34.8	39.8	33.4		
5	532859	343760	46.7	24.9	32.4	30.9	33.5	30.6	29.5	31.4	36.2	31.4	34.9	28.5	32.6	27.4		
8	533112	344476	38.3	32.6	31.3	27.4	33.2	30.9	31.6	31.4	37.7	32.0	35.4	29.5	32.6	27.4		
9	533251	344642	40.3	35.8	38.9	30.3	35.8	36.7	33.1	35.2	41.9	39.5	39.8	48.0	37.9	31.9		
12	532168	343987	32.2	34.0	28.5	31.6	28.8	31.0	29.0	51.6	30.0	23.4	31.4	25.5	31.4	26.4		
14	533226	344624	39.7	33.4	36.8	32.1	32.6	34.7	31.9	31.5	36.9	36.2	36.0	31.4	34.4	28.9		
16	532855	343719	36.0	33.4	32.2	31.3	30.4	31.9	28.8	28.5	34.1	30.0	33.6	26.5	31.4	26.4		
17	532877	343690	38.2	33.0	34.1	31.4	26.7	27.8	28.1	-	32.7	29.7	35.1	29.0	31.4	26.4		
18	532600	342737	41.6	29.4	38.8	24.4	34.1	34.0	31.6	32.8	36.6	40.3	39.0	31.7	34.5	29.0		
19	532630	342760	32.2	25.9	29.3	22.4	25.9	23.7	22.2	24.1	27.7	31.4	33.0	25.5	26.9	22.6		
20	532744	343719	49.0	42.8	44.8	50.8	43.6	54.0	46.0	39.5	56.3	35.6	39.5	34.7	44.7	37.6	24.5	
21	532024	344060	37.6	32.1	33.1	28.2	28.4	28.9	26.3	24.6	31.9	26.1	29.4	26.9	29.5	24.7		
22	532547	343697	40.4	38.9	-	-	-	-	28.3	23.0	34.5	36.2	34.0	-	33.6	28.2		

☒ **All erroneous data has been removed from the NO_2 diffusion tube dataset presented in Table B.1 .**

☒ **Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG16.**

☐ **Local bias adjustment factor used.**

☒ **National bias adjustment factor used.**

☒ **Where applicable, data has been distance corrected for relevant exposure in the final column**

☒ **Boston Borough Council confirm that all 2021 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System**

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**.

See Appendix C for details on bias adjustment and annualisation.

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

New or Changed Sources Identified Within Boston Borough Council During 2021

Boston Borough Council has not identified any new sources relating to air quality within the reporting year of 2021.

Additional Air Quality Works Undertaken by Boston Borough Council During 2021

Boston Borough Council has developed of numerous measures within 2021. These include;

- Completion of Phase 1 of Boston Distributor Road, linking A16 with B1397. Feasibility study of Phase 2 has also been completed
- Progress on the review and refresh of Boston Transport Strategy, with completion expected in Spring 2022.
- Development of a new Bus Services Improvement Plan
- Works continuing on electric buses and use of alternative fules with major operators
- EV Charging considered priority in new Local Transport Plan V, currently in progress and due to be completed in 2022.
- Proposed station enhancements to develop transport interchange and *rail to town centre* cycle routes.

3.3 QA/QC of Diffusion Tube Monitoring

Gradko International Ltd supply and analyse Boston Borough Council's diffusion tubes. The tubes were prepared using the 20% TEA in water preparation method. During 2021, Boston Borough Council's diffusion tube monitoring was carried out for all months in accordance with the 2021 Diffusion Tube Monitoring Calendar.

Diffusion Tube Annualisation

One non-automatic monitoring (diffusion tube) site recorded data capture of <75% therefore requiring annualisation. Annualisation was undertaken using an average annualisation factor, calculated using background concentrations from the three closest AURN sites to Boston Borough Council. Raw diffusion tube data was then annnualised using the average annualization factor to provide annual annualised mean concentrations. An annualization summary is provided in Table C.2.

Diffusion Tube Bias Adjustment Factors

The diffusion tube data presented within the 2022 ASR have been corrected for bias using an adjustment factor. Bias represents the overall tendency of the diffusion tubes to under or over-read relative to the reference chemiluminescence analyser. LAQM.TG16 provides guidance with regard to the application of a bias adjustment factor to correct diffusion tube monitoring. Triplicate co-location studies can be used to determine a local bias factor based on the comparison of diffusion tube results with data taken from NO_x/NO_2 continuous analysers. Alternatively, the national database of diffusion tube co-location surveys provides bias factors for the relevant laboratory and preparation method.

As there are no Automatic monitoring stations within Boston Borough Council a national bias adjustment factor of 0.84 has been applied to the 2021 monitoring data. A summary of bias adjustment factors used by Boston Borough Council over the past five years is presented in Table C.1.

Table C.1 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2021	National	04/22	0.84
2020	National	03/21	0.81
2019	National	09/20	0.92
2018	National	06/19	0.93
2017	National	09/18	0.89

NO_2 Fall-off with Distance from the Road

Wherever possible, monitoring locations are representative of exposure. However, where this is not possible, the NO_2 concentration at the nearest location relevant for exposure

has been estimated using the Diffusion Tube Data Processing Tool/NO_2 fall-off with distance calculator available on the LAQM Support website. Where appropriate, non-automatic annual mean NO_2 concentrations corrected for distance are presented in Table B.1 above and Table C.4 below.

Monitoring sites 3 and 20 were included in the fall off with distance calculator.

Table C.2 – Annualisation Summary (concentrations presented in µg/m^3)

Site ID	Annualisation Factor Nottingham Centre	Annualisation Factor Leicester University	Annualisation Factor Immingham Woodlands	Average Annualisation Factor	Raw Data Annual Mean	Annualised Annual Mean	Comments
22	0.9880	0.9880	1.0202	0.9988	33.6	33.6	

Table C.3 – NO_2 Fall off With Distance Calculations (concentrations presented in µg/m^3)

Site ID	Distance (m): Monitoring Site to Kerb	Distance (m): Receptor to Kerb	Monitored Concentration (Annualised and Bias Adjusted	Background Concentration	Concentration Predicted at Receptor	Comments
3	0.5	0.6	39.3	12.1	*38.4*	Predicted concentration at Receptor within 10% the AQS objective.
20	2.0	18.0	37.6	12.1	24.5	

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

Figure D.1 – Map of Non-Automatic Monitoring Site: Haven Bridge AQMA

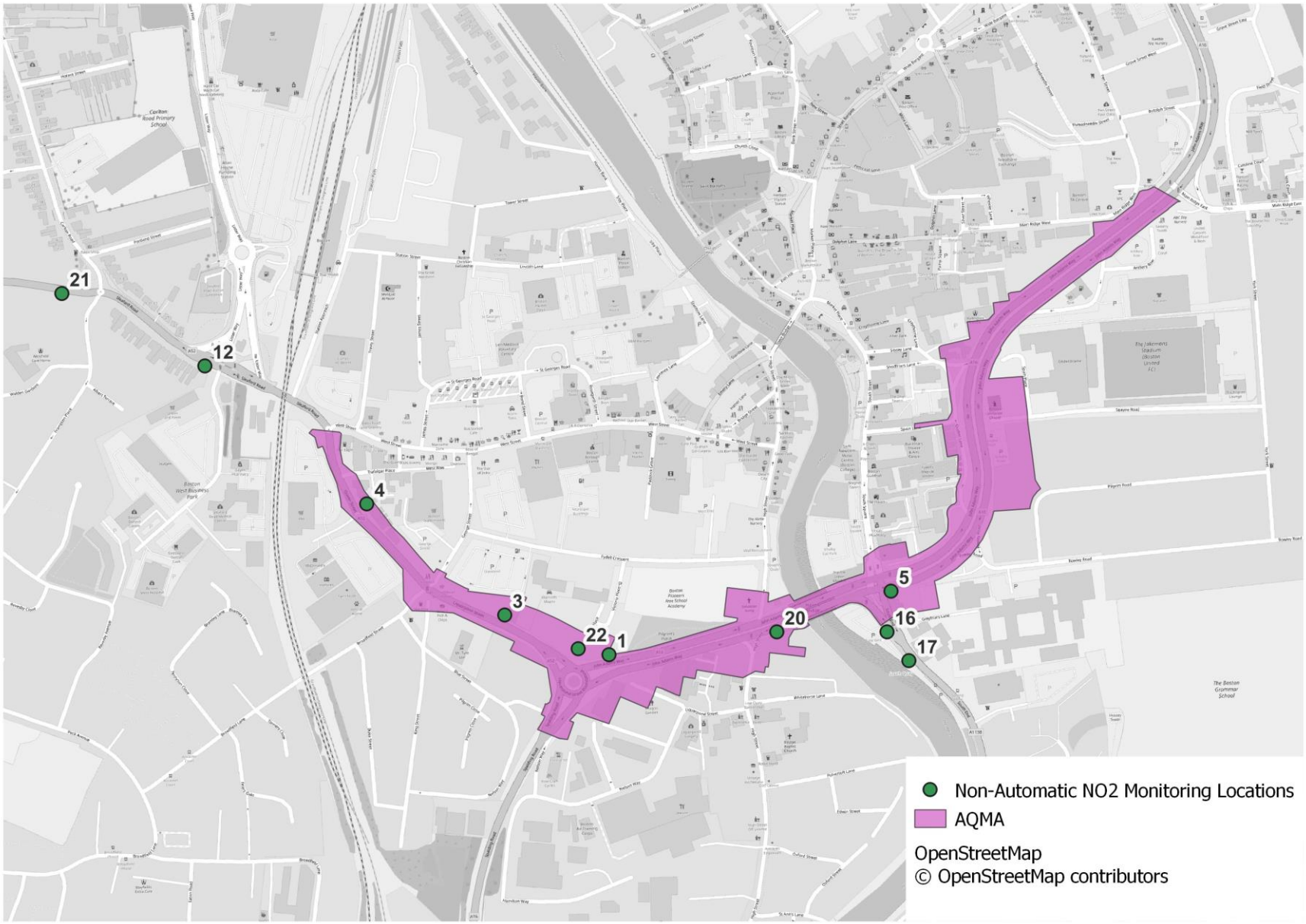


Figure D.2 – Map of Non-Automatic Monitoring Site: Bargate Bridge AQMA

Figure D.3 – Map of Non-Automatic Monitoring Site: Boston South

Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England[9]

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

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

Glossary of Terms

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

References

- Local Air Quality Management Technical Guidance LAQM.TG16. April 2021. Published by Defra in partnership with the Scottish Government, Welsh Assembly Government and Department of the Environment Northern Ireland.
- Local Air Quality Management Policy Guidance LAQM.PG16. May 2016. Published by Defra in partnership with the Scottish Government, Welsh Assembly Government and Department of the Environment Northern Ireland.
- Boston Borough Council 2021 Annual Status Report.
- Boston Borough Council 2020 Annual Status Report.
- Boston Borough Council 2019 Annual Status Report.
- Boston Borough Council 2020 Air Quality Action Plan.
- Boston Borough Council Annual Status Report Defra Appraisal. June 2021.