2024 Air Quality Annual Status Report (ASR)

In fulfilment of Part IV of the Environment Act 1995 Local Air Quality Management, as amended by the Environment Act 2021

Date: June, 2024

Information	City of York Council Details
Local Authority Officer	Andrew Gillah
Department	Public Protection
Address	City of York Council, Public Protection Hazel Court Eco Depot, James Street, York, YO10 3DS
Telephone	(01904) 551525
E-mail	public.protection@york.gov.uk
Report Reference Number	ASR2024
Date	June 2023

Executive Summary: Air Quality in Our Area

Air Quality in York

Breathing in polluted air affects our health and costs the NHS and our society billions of pounds each year. Air pollution is recognised as a contributing factor in the onset of heart disease and cancer and can cause a range of health impacts, including effects on lung function, exacerbation of asthma, increases in hospital admissions and mortality. In the UK, it is estimated that the reduction in healthy life expectancy caused by air pollution is equivalent to 29,000 to 43,000 deaths a year[1].

Air pollution particularly affects the most vulnerable in society, children, the elderly, and those with existing heart and lung conditions. Additionally, people living in less affluent areas are most exposed to dangerous levels of air pollution[2].

Table ES 1 provides a brief explanation of the key pollutants relevant to Local Air Quality Management and the kind of activities they might arise from.

Table ES 1 - Description of Key Pollutants

Pollutant	Description
Nitrogen Dioxide (NO_2)	Nitrogen dioxide is a gas which is generally emitted from high-temperature combustion processes such as road transport or energy generation.
Sulphur Dioxide (SO_2)	Sulphur dioxide (SO_2) is a corrosive gas which is predominantly produced from the combustion of coal or crude oil.
Particulate Matter (PM_{10} and $PM_{2.5}$)	Particulate matter is everything in the air that is not a gas. Particles can come from natural sources such as pollen, as well as human made sources such as smoke from fires, emissions from industry and dust from tyres and brakes. PM_{10} refers to particles under 10 micrometres. Fine particulate matter or $PM_{2.5}$ are particles under 2.5 micrometres.

[1] UK Health Security Agency. Chemical Hazards and Poisons Report, Issue 28, 2022.

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

Through monitoring of air quality across the city, City of York Council (CYC) has previously identified some areas of the city centre, around the inner ring road, where long term annual average nitrogen dioxide (NO_2) levels are above health based objective levels. These areas have been incorporated into an Air Quality Management Area (AQMA). Historically, AQMAs have also existed in Fulford (AQMA Order No.2) and on Salisbury Terrace (AQMA Order No.3). These AQMAs were revoked in 2020 and 2017 respectively due to improvements in air quality in these areas of the city. Current and historical AQMAs declared by CYC can be viewed at List of York AQMAs and are discussed in CYC's previous Annual Status Reports.

CYC has a statutory duty to try to reduce NO_2 concentrations within the remaining city centre AQMA and additional obligations in relation to the protection of public health and reduction of greenhouse gas emissions. The main air pollutants of concern in York are NO_2 and particulate matter (PM). Typically, transport sources are responsible for around 50-70% of the total NO_2 at any particular location in the city, although the exact amount varies according to proximity to roads and other emission sources. Road transport is also a source of PM emissions, although its contribution is less than half that of domestic burning of solid fuels in closed stoves and open fires.

The latest air pollution monitoring data for 2023, summarised in this report, indicates that NO_2 concentrations in the AQMA have improved since 2022. The highest concentration of NO_2 recorded at a location representative of long-term public exposure in 2023 was 43µg/m^3 near the junction of Gillygate and Bootham (diffusion tube reference A1). This contrasts with 2022, where NO_2 concentrations of 47µg/m^3 were monitored on Gillygate.

Improvements in annual mean NO_2 monitored at roadside continuous monitoring stations were observed between 2022 and 2023 at Fishergate (10% improvement), Nunnery Lane (7% improvement), Gillygate (7% improvement), Lawrence Street (8% improvement) and Heworth Green (13% improvement). Annual mean NO_2 monitored at Holgate Road and Fulford Road in 2023 was broadly comparable to that monitored in 2022 (~1% change).

Annual mean background concentrations of NO_2 monitored at Bootham Park Hospital (City of York Council's urban background continuous monitoring site) also improved by 6% between 2022 and 2023.

Concentrations of NO_2 monitored at the majority of locations in York throughout 2023 continue the general downward trend in NO_2 concentrations monitored in the city since 2012. Ongoing air quality monitoring in all locations will be fundamental to understanding the longer-term environmental impacts of the pandemic and the magnitude of any changes

due to increased levels of walking and cycling, changes in public transport use and ongoing air quality improvement initiatives.

With respect to the city centre AQMA, 5 CYC monitoring locations measured annual mean NO_2 concentrations of 40µg/m^3 or above in 2023. Exceedances of the health based annual mean NO_2 objective of 40µg/m^3 were monitored at one location on Gillygate (Diffusion Tube 7), at the junction of Gillygate and Bootham (Diffusion Tube A1) and on Rougier Street (Diffusion Tube 115[3]). Two further locations on Gillygate (Diffusion Tubes 13 and 14) measured annual mean NO_2 concentrations equal to the objective of 40µg/m^3.

Maximum annual mean concentrations of NO_2 monitored at relevant locations across the current AQMA were 43µg/m^3 (Gillygate / Bootham), 37µg/m^3 (George Hudson St / Rougier St), 37µg/m^3 (Holgate / Blossom Street), 31µg/m^3 (Lawrence St), 29µg/m^3 (Fishergate / Paragon St), 26µg/m^3 (Prices Lane/Nunnery Lane) and 35µg/m^3 (Coppergate). Maximum concentrations of NO_2 decreased in all these areas between 2022 and 2023 and ranged from 2% lower on Coppergate (in 2023) to 16% lower around Prices Lane / Nunnery Lane and Rougier Street (in 2023).

In line with DEFRA's LAQM guidance, before revoking an AQMA on the basis of measured pollutant concentrations, a local authority needs to be reasonably certain that any future exceedences of air quality objectives are unlikely. For this reason, it is expected that local authorities will need to consider measurements carried out over several years or more, national trends in emissions, as well as local factors that may affect the AQMA. Additionally, where NO_2 monitoring is undertaken using diffusion tubes, to allow for the uncertainty associated with the monitoring method, it is recommended that revocation of an AQMA should only be considered following three consecutive years of annual mean NO_2 concentrations being lower than 36µg/m^3 (i.e. within 10% of the annual mean NO_2 objective). CYC will keep the AQMA boundary under review, taking into account these guidelines.

Concentrations of NO_2 monitored in the former Fulford Road AQMA in 2023 continue to be well below the annual mean objective of 40µg/m^3. The highest recorded levels of NO_2 in this area were monitored on Fulford Main Street (Diffusion Tube C58) and were 25µg/m^3.

[3] Tube 115 located at a bus stop and therefore not a relevant location with respect to annual mean NO_2 objective

This supports the decision to revoke the Fulford Road AQMA, as discussed in CYC's previous Annual Status Reports and implemented in February 2020.

Concentrations of NO_2 monitored in the former Salisbury Terrace / Leeman Road AQMA in 2023 were also all well below the annual mean objective of 40µg/m^3. The highest recorded levels of NO_2 in this area were monitored on Salisbury Terrace (Diffusion Tube 104) and were 27µg/m^3. This confirms that the decision to revoke this AQMA in December 2017 was appropriate.

In December 2018, the boundary of the city centre AQMA was extended to include the full length of Coppergate and the buildings either side of the road, due to monitored concentrations of NO_2 above the annual mean objective for this pollutant. The highest annual mean concentrations of NO_2 monitored along Coppergate in 2023 was 35µg/m^3 at site D56 (Three Tuns Pub, 12 Coppergate) which is below the annual mean objective for this pollutant. Whilst annual mean concentrations of NO_2 were below the objective in this location in 2022 and 2023 (35-36 µg/m^3), they are well above concentrations monitored in 2020 and 2021 (31-32 µg/m^3). It is therefore considered appropriate to keep this area of the city under observation to establish longer term trends, prior to making any amendments to the AQMA boundary.

Revisions to the AQMA Order in 2018 also removed the reference to breaches of the short-term hourly objective along George Hudson Street / Rougier Street / Bridge Street based on monitoring results in this area. The latest 2023 monitoring results for this area of the city indicate that this short-term objective is still being met (all annual mean concentrations were less than 60µg/m^3 which suggests that an exceedance of the 1-hour mean objective is unlikely).

CYC monitored particulate (PM_{10}) at four sites in the city (Bootham, Fishergate, Holgate Road and Plantation Drive) and fine particulate ($PM_{2.5}$) at three sites (Bootham, Fishergate and Gillygate) in 2023. National health-based air quality objectives for PM_{10} and $PM_{2.5}$ are currently met in York. The highest annual mean levels of PM_{10} and $PM_{2.5}$ monitored in York during 2023 were 16.8µg/m^3 (at Holgate Road) and 8.0µg/m^3 (at Fishergate) respectively. Along with many areas of the UK, these concentrations are above World Health Organisation (WHO) guidelines for these pollutants, which have recently been strengthened to 15µg/m^3 (PM_{10}) and 5µg/m^3 ($PM_{2.5}$). Maximum particulate concentrations monitored in 2023 are below the maximum levels of 17.9µg/m^3 (PM_{10}) and 8.8µg/m^3 ($PM_{2.5}$) monitored in 2022 at the same sites.

Actions to Improve Air Quality

Whilst air quality has improved significantly in recent decades, there are some areas where local action is needed to protect people and the environment from the effects of air pollution.

The Environmental Improvement Plan[4] sets out actions that will drive continued improvements to air quality and to meet the new national interim and long-term targets for fine particulate matter ($PM_{2.5}$), the pollutant of most harmful to human health. The Air Quality Strategy[5] provides more information on local authorities' responsibilities to work towards these new targets and reduce fine particulate matter in their areas.

The Road to Zero[6] details the Government's approach to reduce exhaust emissions from road transport through a number of mechanisms, in balance with the needs of the local community. This is extremely important, given that cars are the most popular mode of personal travel and the majority of Air Quality Management Areas (AQMAs) are designated due to elevated concentrations heavily influenced by transport emissions.

CYC previously produced two Air Quality Action Plans (AQAPs) in 2004 and 2006. These previous plans were primarily modal shift and congestion reduction based plans, with emphasis on reducing vehicle trips across the city.

Despite the introduction of two AQAPs, air quality in York continued to deteriorate between 2004 and 2010. In response, York adopted an overarching Low Emission Strategy (LES) in 2012 to tackle the issue. This document was the first of its kind in the UK and set out a new approach to local air quality management based on reducing emissions from all sources, including tailpipe emissions from individual vehicles and encouraging the uptake of alternative fuels and low emission vehicle technologies. The Low Emission Strategy has proved particularly effective at tackling emissions from essential service vehicles such as buses and taxis, which fall outside the scope of trip reduction based modal shift measures.

[4] DEFRA. Environmental Improvement Plan 2023, January 2023

[5] DEFRA. Air Quality Strategy – Framework for Local Authority Delivery, August 2023

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

Modal shift and congestion reduction measures remain fundamental to the delivery of air quality improvement and emission reduction in York. The primary local delivery programmes for these measures are the Local Transport Plan and the iTravel York programme. Existing programmes and those such as Government Active Travel Funding encourage the uptake of walking, cycling, and public transport in the city. They are supported by planning policies that ensure that sustainable travel solutions are embedded into all new developments in York.

In February 2023, CYC published a draft Local Transport Strategy, that set out high level principles and priorities for York that will underpin future transport strategies for the city. The document examines the evidence, sets out implications and suggests the sort of interventions which could be used to overcome the challenges with York's existing transport system. Tackling transport emissions is recognised as key policy strand within the draft strategy. CYC undertook extensive consultation on the draft strategy between November 2023 and February 2024. Initial results have shown overwhelming support for the ten policy focus areas put forward, one of which relates to 'safeguarding our environment by cutting carbon, air pollution and noise'.

Over the same period, CYC consulted with the public and other groups to gather feedback specifically on air quality in York and on measures to improve air quality proposed in our updated Air Quality Action Plan (AQAP4). Annual Status Reports from 2025 onwards will report on progress with delivery of measures in this updated plan.

CYC continued the delivery of measures in its third Air Quality Action Plan (AQAP3) throughout 2023, progressing the following initiatives and projects:

- **Bus service improvements -** In August 2023, First Bus together with City of York Council 'switched on' a new fleet of zero emission buses for York in a transformation that will see the York bus depot become one of the first outside London to be fully electric. The buses herald new 'York electric' branding. Additional electric buses have since been introduced across other routes in the city. Each bus will significantly reduce NO_x and particulate emissions and save up to 60 tonnes of carbon emissions a year, meaning an anticipated annual reduction of more than 3,000 tonnes of CO_2 when the full fleet is in operation. As part of the overall

investment, the First Bus depot has been transformed with the installation of power charging and infrastructure to handle the full zero emission fleet, totalling 86 buses. The new buses, supported by funding through DfT's Zero Emission Bus Regional Areas (ZEBRA) scheme, complement the existing electric buses serving York's Park and Ride sites. CYC has also been awarded additional funding to support the development of key schemes and initiatives in line with York's Bus Service Improvement Plan (BSIP), including wider electrification of the urban bus fleet, bus priority measures, improvements to stops, shelters and passenger information. The York Enhanced Partnership for Buses will act as the principal delivery body for the BSIP funding until 2025. CYC has previously launched a Clean Air Zone (CAZ) for buses in the city centre and supported operators with bus upgrades as reported in previous Annual Status Reports.

- **Anti Idling Initiatives** – we continued to promote our 'Kick the Habit' anti-idling campaign on Clean Air Day and throughout 2023 and worked with partners including schools and businesses to reduce the incidence of vehicle idling across the city. The campaign sets out to encourage people to think about the importance of clean air and the impact that this has on them, their health and those around them. Work in 2023 reinforces action in previous years, including the erection of permanent anti-idling signage in all CYC owned car parks, at most city centre bus stops, multiple taxi ranks and at other key locations across the city. Further information about the campaign can be found on CYC's Kick the Habit Webpage.

- **Low Emission Taxi Grant** – throughout 2023, we continued to rollout our DEFRA funded Low Emission Taxi Grant Scheme and welcomed further all-electric and hybrid-electric taxis to the York fleet. The scheme offers financial support for eligible CYC registered taxi drivers to upgrade to low emission vehicles and will have the direct effect of reducing emissions of NO_x/NO_2 and particulate matter across

York. At the end of December 2023, 37% of the York fleet were using low emission petrol hybrid or zero emission electric vehicles. We have further plans to update our Taxi Licensing Policy in 2024 to further reduce taxi emissions, in consultation with the trade and other relevant parties.

- **Upgrades to Electric Vehicle (EV) charging facilities** – we continued to upgrade our public electric vehicle charging network, consisting of 'fast', 'rapid' and 'ultra-rapid' charge points, as outlined in our Public Electric Vehicle Charging Strategy. Two new 'HyperHub' sites (containing both 50kW rapid and 175kW ultra-rapid charge facilities) at Monks Cross and Poppleton were opened in 2022 and 2023; the use of these sites comprised over 80% of our network usage. We have plans to develop two further Hyper Hub sites. Our current charge point rollout programme is outlined on the council website. In addition to the expansion of our public electric vehicle charge point network, we finalised infrastructure upgrades at the council's Hazel Court ECO depot site to facilitate the transition to an all-electric council fleet for vehicles under 3.5t. In February 2024, 41% of CYC's operational fleet (<3.5t) were electric vehicles. In preparation for the new fleet of electric vehicles, we continued our programme of mandatory Alternative Fuel Vehicle (AFV) training for all staff.
- **CYC Low Emission Planning Guidance -** Throughout 2023, we continued to ensure that emissions and air quality impacts from new developments were appropriately assessed and mitigated, exposure to poor air quality was reduced via good design practices and that new private trips were minimised via the provision of sustainable transport opportunities. An overview of planning applications reviewed by Public Protection during 2023 is provided in this Annual Status Report.
- **Measures around domestic solid fuel burning** – we promoted the government's national 'Burn Better' campaign to reduce emissions and continued compliance checks across solid fuel distribution outlets to ensure correct certification of solid fuels for domestic use. In early 2023, we were awarded further DEFRA Air Quality Grant funding to improve public awareness of domestic solid fuel burning practices, particulate emissions and associated health impacts. We undertook research via an online survey and hosted a number of focus groups with the local community to inform the creative route for the campaign, which was launched in November 2023. Details of the campaign, named *'Fuel for Thought',* can be found at https://www.york.gov.uk/FuelForThought.

- **Development of an online pollution forecasting service** – In 2023 we were awarded DEFRA funding to develop an online air pollution forecasting and notification service to allow residents and visitors to York to access information that allows them to minimise their own exposure when pollution episodes are forecast. The York Air Alert service is of particular benefit to anyone who suffers from health conditions exacerbated by poor air quality. The service provides a 3-day forecast of air pollution in 8 areas of York. The service is free to subscribe to and provides notifications via email, text, voicemail and Twitter/X to users.

- **Consultation on fourth Air Quality Action Plan (AQAP4)** – we progressed a public consultation on our Fourth Air Quality Action Plan (AQAP4) between 22nd November 2023 and 4th February 2024. AQAP4 was developed in parallel to CYC's draft Local Transport Strategy, which was also consulted on during the same period. AQAP4 aims to reduce levels of air pollution in the city, thereby improving the health and quality of life of residents and visitors to York. AQAP4 outlines the action the council will take to further improve air quality in York over the next 5 years. Over three quarters (79%) of respondents agreed that the council should continue to reduce air pollution, with between 67% and 87% of respondents indicated support for all AQAP4 priority areas. See https://www.york.gov.uk/AirQualityActionPlan.

- **Air Quality Hub (AQ Hub) for local authorities** - throughout 2023, we continued work on the development of the Air Quality (AQ) Hub alongside Bradford Metropolitan District Council and Lancaster City Council (working together as the Low Emission Partnership (LEP), with management support provided by Bureau Veritas). The AQ Hub was promoted at the national Air Quality Symposium, organised by DEFRA, in September 2023. Following a successful launch, the AQ Hub membership base has grown significantly over the last 3 years, covering local authorities across the UK. The Air Quality Hub was formally adopted by DEFRA in February 2024 to support the Local Air Quality Management regime and will now be managed by DEFRA as a national resource, with ongoing support from the Low Emission Partnership.

- **Farming practices** - Nationally, farming is estimated to be responsible for around 88% of ammonia emissions, which can lead to particulate formation in the atmosphere; this can cause odour impacts and can affect local and national air quality. Some farming practices (e.g. lime spreading) can also directly give rise to particulate emissions that

are known to affect health. In October 2023, CYC contacted over 350 farmers to highlight resources and grant opportunities available to assist in adopting best practice with respect to reducing ammonia and particulate emissions.

Complementary air quality initiatives delivered in 2023 through CYC's Transport and carbon reduction work programmes included:

- **Local Cycling and Walking Infrastructure Plan (LCWIP) –** we have progressed development of a Local Cycling and Walking Infrastructure Plan (LCWIP). The LCWIP identifies York's key walking and cycling networks and will be used as an evidence base for future investment opportunities. The LCWIP will be a living document and will be updated as and when necessary (i.e. when schemes have been funded or delivered) to ensure a pipeline of potential schemes is always available
- **York Walking Festival** – our annual walking festival took place in September 2023, with a nine-day programme of ideas on how to explore the city on foot. The festival, organised by CYC's iTravel team, aims to encourage active travel and reduce vehicle emissions produced during the school run. Activities included guided group walks, a York walking quiz and promotion of resources for exploring the city.
- **Zero Emission Day** - In September 2023, to coincide with Zero Emission Day, we raised awareness of the need to reduce the city's carbon footprint by flying a flag bearing the Yorkshire climate change stripes. The climate stripes were developed to show people how the climate is changing where they live. Shades of blue indicate cooler-than-average years, while red shows years that were hotter-than-average. The Yorkshire climate stripes highlight the increase in temperature in Yorkshire over the past 150 years, shown in the stripes from left to right. In March 2019, CYC declared a climate emergency and pledged to be net zero by 2030.

- **A New Energy Advice Scheme** – we launched a Local Energy Advice Demonstrator (LEAD) scheme. LEAD provides York homeowners of conservation-area and listed properties detailed advice on the best ways to insulate and heat their homes; information on how to complete planning permission applications and gain listed

property consent; and the best ways to save money while contributing to our Net Zero 2030 target.

- **Home Upgrade Grants** – we have been awarded funding to help households not using mains gas become more energy efficient through a Home Upgrade Grant. The grants can be used for a range of improvements, including wall and roof insulation, air source heat pumps, smart heating controls and solar panels.
- **Business Forum Events** – We launched the first York Green Business Forum event in October 2023 to support local businesses to become more sustainable, increase profitability and help York become net zero by 2030. Attendees were able to access free support, participate in workshops and network with likeminded local businesses.
- **Residents invited behind the scenes on Council's first Passivhaus site** – In October 2023, we offered a first opportunity for residents to go behind the scenes to learn more about how energy-efficient and zero-carbon Passivhaus homes are being built in the city. The Passivhaus Open Day took place at CYC's first Passivhaus development at Duncombe Square in Clifton. The Open Day was part of a national event to showcase this form of building homes. Passivhaus is a construction standard with a goal of creating energy-efficient buildings with a low carbon footprint. In order to achieve that, Passivhaus homes use a variety of features that are designed to reduce their need for heating and cooling rooms.

York already has much to celebrate in relation to reducing emissions and protecting and improving the health of its residents. However, with an increasing population and further development, preventing emission growth and improving air quality remain significant challenges for the foreseeable future.

CYC's updated Air Quality Action Plan (AQAP4) outlines the action we will take to further improve air quality in York over the next 5 years between 2024 and 2028 to go beyond health-based National Air Quality Objectives in all areas and to work towards meeting stricter World Health Organisation (WHO) Guidelines in the longer term. AQAP4 is fully aligned to the Council Plan and reflects ambitions contained within our 10-Year Strategies covering climate, health and wellbeing and the economy.

Conclusions and Priorities

Key findings and conclusions from this year's Annual Status Report:

- The annual average air quality objective for NO_2 (40µg/m^3) was exceeded at a small number of monitoring sites within the current Air Quality Management Area on Gillygate, Bootham and Rougier Street in 2023 (Diffusion Tubes 7, 115 and A1). The highest concentration of NO_2 recorded at a 'relevant location' was 43µg/m^3 near the junction of Gillygate and Bootham (Diffusion Tube A1).
- Improvements in annual mean NO_2 monitored at roadside continuous monitoring stations were observed between 2022 and 2023 at Fishergate (10% improvement), Nunnery Lane (7% improvement), Gillygate (7% improvement), Lawrence Street (8% improvement) and Heworth Green (13% improvement). Annual mean NO_2 monitored at Holgate Road and Fulford Road in 2023 was broadly comparable to that monitored in 2022 (~1% change). Annual mean background concentrations of NO_2 monitored at the Bootham urban background monitoring site also improved by 6% between 2022 and 2023.
- Maximum annual mean concentrations of NO_2 monitored at relevant locations across the current AQMA were 43µg/m^3 (Gillygate / Bootham), 37µg/m^3 (George Hudson St / Rougier St), 37µg/m^3 (Holgate / Blossom Street), 31µg/m^3 (Lawrence St), 29µg/m^3 (Fishergate / Paragon St), 26µg/m^3 (Prices Lane/Nunnery Lane) and 35µg/m^3 (Coppergate). Maximum concentrations of NO_2 decreased in all these areas between 2022 and 2023 and ranged from 2% lower on Coppergate (in 2023) to 16% lower around Prices Lane / Nunnery Lane and Rougier Street (in 2023).
- Concentrations of NO_2 monitored at the majority of locations in York throughout 2023 continue the general downward trend in NO_2 concentrations monitored in the city since 2012. Concentrations of NO_2 were generally lower in the years 2021 - 2023 than pre-pandemic levels in 2019.
- Maximum concentrations of NO_2 monitored in the former Fulford Road and Salisbury Terrace / Leeman Road AQMAs (now revoked) in 2023 continue to be well below the annual mean objective.
- The highest annual mean concentrations of NO_2 monitored along Coppergate in 2023 was 35µg/m^3 at site D56 (Three Tuns Pub, 12 Coppergate) which is below the annual mean objective for this pollutant. As concentrations of NO_2 have been variable at this site over the last few years and not consistently under 36µg/m^3 (within 10% of the

objective) it is considered appropriate to keep this area of the city under observation prior to making any amendments to the AQMA boundary.

- Monitoring of NO_2 in 2023 has not indicated any potential breaches of the short-term hourly NO_2 objective in the city.
- National health-based air quality objectives for PM_{10} and $PM_{2.5}$ are currently met in York. The highest annual mean levels of PM_{10} and $PM_{2.5}$ monitored in York during 2023 were 16.8µg/m^3 and 8.0µg/m^3 respectively. Trends over the last 5 years indicate that $PM_{2.5}$ has generally decreased across the city, whereas there does not appear to be any clear trend in PM_{10} over the same period.

City of York Council's priorities for the coming year are:

- **Progress delivery of AQAP4** - CYC's updated AQAP4 includes measures to further reduce nitrogen dioxide and particulates from all sources and will support and complement CYC's economic strategy, Local Plan, Local Transport Plan/Strategy and Climate Change Strategy.
- **Continue to progress upgrades to bus services (including further electrification of the urban fleet)** - the York Enhanced Partnership (EP) for buses between CYC and York's local bus operators acts as the principal delivery body for the £17.36 million Bus Service Improvement Plan (BSIP) funding awarded to the council by the Department of Transport (DfT) for use during the financial years 2022 to 2025. The EP also provides a platform for bus users and stakeholders to share their views on the local bus network.
- **Continue to address idling emissions** – CYC will continue to provide anti-idling patrols, investigate complaints of idling and raise awareness of the links between idling emissions and health in line with CYC's existing 'Kick the Habit' anti-idling campaign. We propose to install additional permanent anti-idling signage in key locations requesting drivers switch off engines whilst stationary.
- **Continue to reduce emissions from taxis** - We will undertake further consultation with the trade in relation to updates to our Taxi Licensing Policy. Anticipated changes to the policy will see a gradual change in the operational taxi fleet, as vehicle licenses are renewed and as vehicles become too old to operate in the city. We will undertake a full evaluation of our DEFRA funded Low Emission Taxi Grant Scheme that has supported CYC licensed taxi drivers with vehicle upgrades throughout 2023. This grant funding has now all been allocated.

- **Reduce emissions from new development** – we will continue to work with developers to ensure development related emissions are appropriately assessed and mitigated, exposure to poor air quality is reduced via good design practices and that new private trips are minimised via provision of opportunities for sustainable transport. We will continue to encourage walking, cycling and low emission public transport use, which have co-benefits for health and wellbeing.
- **Progress development of York's future transport policies** - Initial results from Our Big Transport Conversation, the recent consultation about transport in York, have shown overwhelming support for the ten policies put forward by Councillors. CYC will now formulate detailed plans for delivering the long-term changes residents have asked for, including a new Movement and Place Plan. A new Local Transport Plan will enable us to reduce congestion, improve air quality and help people get about the city better, as well as meeting our net zero targets.
- **Expansion of strategic EV charging network** - CYC will deliver additional charge points and actively monitor plug-in vehicle uptake in the city to ensure our charging network remains fit for purpose.
- **Raising awareness of PM emissions and health impacts** - we will fully evaluate our DEFRA funded project (2022/23 AQ Grant) to improve public awareness of the links between domestic solid fuel burning, particulate emission and health impacts.
- **Improving public awareness of air pollution** – we will promote our DEFRA funded air pollution forecasting and alert platform. The platform has been designed to ensure the most vulnerable residents have access to information that allows them to minimise exposure when pollution levels are high. We will seek to improve awareness of the links between all air pollution and health impacts generally to support CYC's ongoing LAQM and public health work.
- **Further controls to address fine particulate emissions** – we will consider further opportunities to tackle fine particulate emissions, building on previous feasibility work. We will seek member approval for a new Enforcement Protocol for civil penalties for smoke emissions within CYC's Smoke Control Area (SCA) and seek to expand our SCA to cover the whole of CYC's administrative area.
- **Reducing emissions associated with deliveries of light goods** – we will explore further opportunities for minimising emissions from freight vehicles in the city centre in line with priorities outlined in AQAP4.

Challenges faced by City of York Council:

- The ability of current vehicle emission standards to deliver reductions in NO_x emissions, particularly the on-road performance of some Euro VI diesel vehicles.
- Development related emissions through the cumulative impact of increased development in the city. CYC will endeavour to manage this through the application of local planning guidance, best practice emission mitigation measures and opportunities for sustainable transport. CYC's Transport Strategy sets a target of 20% reduction in vehicle miles travelled by 2030, which will need to be supported by significant increases in walking, cycling and use of public transport across York.
- Addressing air pollution from domestic solid fuel burning, especially during winter months, may present challenges as people turn to solid fuels to heat their homes in response to the energy and cost of living crisis. This may be further exacerbated in certain areas where fuel poverty may be a factor in the burning of non-certified wood products / waste wood or other materials. CYC has aimed to tackle this issue in 2023 and early 2024 through it's 'Fuel for Thought' campaign.
- Uncertainties with respect to future travel behaviour and challenges in achieving required modal shift targets to sustainable modes.
- Continued unnecessary vehicle idling in the city, particularly amongst heavy diesel vehicles.

Despite longer term improvements seen in air quality across CYC's area in recent years, the above factors are anticipated to remain challenges for CYC in the future.

Local Engagement and How to get Involved

Further information about air quality and previous consultations can be obtained from the air quality pages of CYC's main website.

Residents, businesses and other interested parties are encouraged to participate in future consultations relating to air quality. These are advertised online at: City of York Council Consultations.

Local Responsibilities and Commitment

This ASR was prepared by Public Protection at City of York Council. Updates on Air Quality Action Plan measures have been obtained from various teams across the council

including Transport Planning, Highways, Parking Services, Carbon Reduction and Fleet Services.

This ASR has been approved by Cllr Jenny Kent (Executive Member for Environment and Climate Change) and signed off by Peter Roderick, Director of Public Health and James Gilchrist, Director of Transport, Environment and Planning.

If you have any comments on this ASR please send them to Public Protection at:

Email: public.protection@york.gov.uk

Phone: 01904 551525

Write to: City of York Council, Public Protection (Air Quality), Hazel Court Eco Depot, James Street, York, YO10 3DS

Table of Contents

Figures

Tables

1 Local Air Quality Management

This report provides an overview of air quality in York during 2023. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995), as amended by the Environment Act (2021), 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 order to achieve and maintain the objectives and the dates by which each measure will be carried out. This Annual Status Report (ASR) is an annual requirement showing the strategies employed by City of York Council (CYC) 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 18 months. The AQAP should specify how air quality targets will be achieved and maintained, and provide dates by which measures will be carried out.

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

- NO_2 annual mean

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 Highways England?	Level of Exceedance: Declaration	Level of Exceedance: Current Year	Number of Years Compliant with Air Quality Objective	Name and Date of AQAP Publication	Web Link to AQAP
City Centre AQMA (AQMA Order No.5)	December 2018 (supercedes AQMA Order No. 4 declared Sept 2012)	NO_2 Annual Mean	Inner ring road and properties included within multiple areas of technical breach	NO	62	43	1 (compliance demonstrated in 2020)	AQAP3 published September 2015 (Updated AQAP4 due June 2024)	Link to AQAP

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

☒ **City of York Council confirm that all current AQAPs have been submitted to DEFRA**

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

DEFRA's appraisal of last year's ASR supported the outlined measures to improve air quality across the city and accepted the conclusions reached for all sources and pollutants.

The only comments made by DEFRA with respect to how CYC could improve the Annual Status Report for 2024 was to increase the resolution of maps showing monitoring locations (to ensure labels are clearer when zooming in) and to ensure that no blank cells are presented in Table 2.2 which provides an update on AQAP measures. These issues have been addressed in this year's report.

CYC has taken forward a number of direct measures during the current reporting year of 2023 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 2.2. Twenty six measures are included within Table 2.2, with the type of measure and the progress CYC have made during the reporting year of 2023 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.

Key completed measures are:

- **Bus service improvements** - In August 2023, First Bus together with CYC 'switched on' a new fleet of zero emission buses for York in a transformation that will see the York bus depot become one of the first outside London to be fully electric. Each bus will significantly reduce NO_x and particulate emissions and save up to 60 tonnes of carbon emissions a year, meaning an anticipated annual reduction of more than 3,000 tonnes of CO_2 when the full fleet is in operation. The new buses, supported by funding through DfT's Zero Emission Bus Regional Areas (ZEBRA) scheme, complement the existing electric buses serving York's Park and Ride sites.
- **Anti-idling initiatives** - we continued to promote our 'Kick the Habit' anti-idling campaign on Clean Air Day and throughout 2023 and worked with partners including schools and businesses to reduce the incidence of vehicle idling across

the city. Further information about the campaign can be found on CYC's Kick the Habit Webpage.

- **Low Emission Taxi Grant** – we continued to rollout our DEFRA funded Low Emission Taxi Grant Scheme so that by the end of December 2023, 37% of the York fleet were using low emission petrol hybrid or zero tailpipe emission electric vehicles.
- **Upgrades to Electric Vehicle (EV) charging facilities** – we continued to upgrade our public electric vehicle charging network throughout 2023, consisting of 'fast', 'rapid' and 'ultra-rapid' charge points, as outlined in our Public Electric Vehicle Charging Strategy. We also finalised infrastructure upgrades at the council's Hazel Court ECO depot site to facilitate the transition to an all-electric council fleet for vehicles under 3.5t. In February 2024, 41% of CYC's operational fleet (<3.5t) were electric vehicles.
- **Low Emission Planning Guidance** - Throughout 2023, we continued to ensure that emissions and air quality impacts from new developments were appropriately assessed and mitigated, exposure to poor air quality was reduced via good design practices and that new private trips were minimised via the provision of sustainable transport opportunities in line with our Low Emission Planning Guidance.
- **Measures around domestic solid fuel burning** – we promoted the government's national 'Burn Better' campaign to reduce emissions and continued compliance checks across solid fuel distribution outlets to ensure correct certification of solid fuels for domestic use. We progressed a DEFRA Air Quality Grant funded campaign to improve public awareness of domestic solid fuel burning practices, particulate emissions and associated health impacts. CYC's 'Fuel for Thought' campaign was launched in November 2023.
- **Air pollution forecasting and alert service** – In 2023, we progressed a DEFRA Air Quality Grant funded air pollution forecasting and alert service to allow residents and visitors to York to access information that allows them to minimise their own exposure when pollution episodes are forecast. The York Air Alert service is of particular benefit to anyone who suffers from health conditions exacerbated by poor air quality. The service provides a 3-day forecast of air pollution with 8 zones of York. The service is free to subscribe to and provides notifications via email, text, voicemail and Twitter/X to users.

- **Consultation on fourth Air Quality Action Plan (AQAP4)** – we held a public consultation on our Fourth Air Quality Action Plan (AQAP4) between 22 November 2023 and 4 February 2024. AQAP4 was developed in parallel to CYC's draft Local Transport Strategy, which was consulted on during the same period. AQAP4 aims to reduce levels of air pollution in the city, thereby improving the health and quality of life of residents and visitors to York. AQAP4 outlines the action the council will take to further improve air quality in York over the next 5 years. Over three quarters (79%) of respondents agreed that the council should continue to reduce air pollution, with between 67% and 87% of respondents indicated support for all AQAP4 priority areas.
- **Air Quality Hub (AQ Hub)** - throughout 2023, we continued work on the development of the Air Quality Hub alongside Bradford Metropolitan District Council and Lancaster City Council (working together as the Low Emission Partnership (LEP), with management support provided by Bureau Veritas). The Air Quality Hub was formally adopted by DEFRA in February 2024 to support the Local Air Quality Management regime and will now be managed by DEFRA as a national resource, with ongoing support from the Low Emission Partnership.
- **Emissions from farming practices** - In October 2023, CYC contacted over 350 farmers within York to highlight resources and grant opportunities available to assist them to adopt best practice with respect to reducing ammonia and particulate emissions.

Complementary air quality initiatives delivered in 2023 through CYC's Transport and carbon reduction work programmes included:

- **Local Cycling and Walking Infrastructure Plan (LCWIP)** – we progressed development of a Local Cycling and Walking Infrastructure Plan (LCWIP).
- **York Walking Festival –** our annual walking festival took place in September 2023, with a nine-day programme of ideas on how to explore the city on foot. The festival, organised by CYC's iTravel team, aims to encourage active travel and reduce vehicle emissions produced during the school run.
- **Zero Emission Day -** In September 2023, to coincide with Zero Emission Day, we raised awareness of the need to reduce the city's carbon footprint by flying a flag bearing the Yorkshire climate change stripes. The climate stripes were developed to show people how the climate is changing where they live.

- **A New Energy Advice Scheme** – we launched a Local Energy Advice Demonstrator (LEAD) scheme. LEAD provides York homeowners of conservation-area and listed properties detailed advice on the best ways to insulate and heat their homes; information on how to complete planning permission applications and gain listed property consent; and the best ways to save money while contributing to our Net Zero 2030 target.
- **Home Upgrade Grants** – we were awarded funding to help households not using mains gas become more energy efficient through a Home Upgrade Grant. The grants can be used for a range of improvements, including wall and roof insulation, air source heat pumps, smart heating controls and solar panels.
- **Business Forum Events** – We launched the first York Green Business Forum event in October 2023 to support local businesses to become more sustainable, increase profitability and help York become net zero by 2030. Attendees were able to access free support, participate in workshops and network with likeminded local businesses.
- **Residents invited behind the scenes on Council's first Passivhaus site** – In October 2023, we offered a first opportunity for residents to go behind the scenes to learn more about how energy-efficient and zero-carbon Passivhaus homes are being built in the city. The Passivhaus Open Day took place at CYC's first Passivhaus development at Duncombe Square in Clifton.

City of York Council expects the following measures to be completed over the course of the next reporting year:

- City of York Council's Fourth Air Quality Action Plan (AQAP4) updates and replaces the existing Action Plan (AQAP3) which ran from September 2015 and was the principal delivery mechanism for York's Low Emission Strategy (LES) produced in October 2012. As part of AQAP4's preparation, a comprehensive review of previously adopted air quality improvement measures has been undertaken. Where still relevant to York's air quality issues and principal emission sources, measures and targets have been updated to ensure they strive to achieve continual improvement in air quality across the city over the next 5-year period to improve public health outcomes. Additional measures are included in AQAP4 to reflect:
    - the growing evidence base around air quality and health impacts of fine particulate matter, together with new targets introduced through the

Environment Act 2021 and obligations for local authorities outlined in DEFRA's Air Quality Strategy;

- updated emissions source apportionment work for CYC's area;
- the current air quality position across the city with respect to health-based Air Quality Objectives, and
- additional work undertaken in relation to freight movements since publication of the last AQAP in 2015.

CYC's future Annual Status Reports will report on progress with measures in the updated AQAP4, due for publication in June 2024. Priorities from 2024 are as follows:

City of York Council's priorities for the coming year are:

- **Progress delivery of AQAP4** - CYC's updated AQAP4 includes measures to further reduce nitrogen dioxide and particulates from all sources and will support and complement CYC's economic strategy, Local Plan, Local Transport Plan/Strategy and Climate Change Strategy.
- **Progress upgrades to bus services** - the York Enhanced Partnership (EP) for buses between CYC and York's local bus operators acts as the principal delivery body for the £17.36 million Bus Service Improvement Plan (BSIP) funding awarded to the council by the Department of Transport (DfT) for use during the financial years 2022 to 2025. The EP also provides a platform for bus users and stakeholders to share their views on the local bus network.
- **Continue to address idling emissions** – CYC will continue to investigate complaints of idling and raise awareness of the links between idling emissions and health in line with CYC's existing 'Kick the Habit' anti-idling campaign. We propose to install additional anti-idling signage in key locations requesting drivers switch off engines whilst stationary.
- **Continue to reduce emissions from taxis** - We will undertake further consultation with the trade in relation to updates to our Taxi Licensing Policy. Anticipated changes to the policy will see a gradual change in the operational taxi fleet, as vehicle licenses are renewed and as vehicles become too old to operate in the city. We will undertake a full evaluation of our DEFRA funded Low Emission Taxi Grant Scheme that has supported CYC licensed taxi drivers with vehicle upgrades throughout 2023.

- **Reduce emissions from new development** – we will continue to work with developers to ensure development related emissions are appropriately assessed and mitigated, exposure to poor air quality is reduced via good design practices and that new private trips are minimised via provision of opportunities for sustainable transport.
- **Progress development of York's future transport policies** - Initial results from Our Big Transport Conversation, the recent consultation about transport in York, have shown overwhelming support for the ten policies put forward by councillors. CYC will now fully analyse the results and come back to residents with detailed plans on how to deliver the long-term changes they've asked for, including a new Movement and Place Plan. A new Local Transport Plan will enable us to reduce congestion, improve air quality and help people get about the city better, as well as meeting our net zero targets.
- **Expansion of strategic EV charging network** - CYC will deliver additional charge points and actively monitor plug-in vehicle uptake in the city to ensure our charging network remains fit for purpose.
- **Raising awareness of PM emissions and health impacts** - we will full evaluate our DEFRA funded project (2022/23 AQ Grant) to improve public awareness of the links between domestic solid fuel burning, particulate emission and health impacts.
- **Improving public awareness of air pollution** – we will promote our DEFRA funded air pollution forecasting and alert platform. The platform has been designed to ensure the most vulnerable residents have access to information that allows them to minimise exposure when pollution levels are high. We will seek to improve awareness of the links between all air pollution and health impacts generally to support CYC's ongoing LAQM and public health work.
- **Further controls to address fine particulate emissions** – we will consider further opportunities to tackle fine particulate emissions, building on previous feasibility work. We will seek member approval for a new Enforcement Protocol for civil penalties for smoke emissions within CYC's Smoke Control Area (SCA) and seek to expand our SCA to cover the whole of CYC's administrative area.
- **Reducing emissions associated with deliveries of light goods** – We will explore further opportunities for minimising emissions from freight vehicles in the city centre in line with priorities outlined in AQAP4.

City of York Council worked to implement these measures in partnership with the following stakeholders during 2023:

- Residents of York
- Local schools
- York Railway Station
- York and Scarborough Teaching Hospitals NHS Foundation Trust
- York Bus operators
- York Taxi Driver / Associations (and vehicle dealerships for taxi grants)
- Freight operators and local retailers

The principal challenges and barriers to implementation that City of York Council anticipates facing are:

- The ability of current vehicle emission standards to deliver reductions in NO_x emissions, particularly the on-road performance of some Euro VI / Euro VI retrofitted diesel vehicles.
- Development related emissions through the cumulative impact of increased development in the city. CYC will endeavour to manage this through the application of local planning guidance, best practice emission mitigation measures and opportunities for sustainable transport. CYC's Transport Strategy sets a target of 20% reduction in vehicle miles travelled by 2030, which will need to be supported by significant increases in walking, cycling and use of public transport across York.
- Addressing air pollution from domestic solid fuel burning, especially during winter months, may present challenges as people turn to solid fuels to heat their homes in response to the energy and cost of living crisis. This may be further exacerbated in certain areas where fuel poverty may be a factor in the burning of non-certified wood products / waste wood or other materials. CYC has aimed to tackle this issue in 2023 and early 2024 through it's 'Fuel for Thought' campaign.
- Uncertainties with respect to future travel behaviour and challenges in achieving required modal shift targets to sustainable modes
- Continued unnecessary vehicle idling in the city, particularly amongst heavy diesel vehicles.

Despite longer term improvements seen in air quality across CYC's area in recent years, the above factors are anticipated to remain challenges for CYC in the future.

Progress on the following measures has been slower than expected:

- **Pilot micro-consolidation centre** – this project was delayed in 2023 due to withdrawal of the primary delivery partner at an advanced stage of the project. We aim to progress this pilot in 2024, subject to a new delivery partner being found. The pilot delivery hub will aim to maximise the efficiency of city centre deliveries, using e-cargo cycles and EVs, thereby minimising the need for large vehicles to enter the city centre.

Whilst the measures stated above and in Table 2.2 will help to contribute towards compliance, CYC anticipates that further additional measures, as outlined in our Fourth Air Quality Action Plan (AQAP4), will be required in subsequent years to achieve compliance and enable the revocation of the city centre AQMA (Order No.5).

Table 2.2 – Progress on Measures to Improve Air Quality

The estimated efficacy of measures in terms of 'overall emission impact' is colour coded from **red** (least impact) - **amber** - **green** (most impact). Rows shaded in yellow will be published on UK-AIR.

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	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
AQAP3 (1) Overall Emission Impact = Green	Clean Air Zone (CAZ)	Promoting Low Emission Transport	Low Emission Zone	2015	2021	CYC	CYC and DEFRA Grant	YES	Funded	£1 million - £10 million	Completed	Every electric bus introduced into the CAZ will remove local emissions of NO_2 and PM_{10} and reduce CO_2 emissions by approximately 35 tonnes	Number of CAZ compliant low emission buses (electric and Euro 6) operating within York	York's CAZ for buses was fully operational from January 2021 and applied to all high frequency services entering the CAZ area more than 5 times a day. In August 2023, First Bus together with CYC 'switched on' a new fleet of zero emission buses for York in a transformation that will see the York bus depot become one of the first outside London to be fully electric. The full zero emission fleet will total 86 buses. The new buses have been supported by funding through DfT's Zero Emission Bus Regional Areas (ZEBRA) scheme and complement the existing electric buses serving York's Park and Ride sites. CYC has also been awarded additional funding to support the development of key schemes and initiatives in line with York's Bus Service Improvement Plan (BSIP), including wider electrification of the urban bus fleet, bus priority measures, improvements to stops, shelters and passenger information.	Measures to reduce emissions from buses were a critical part of AQAP3. CYC made funding available to support bus upgrades on essential services affected by CAZ implementation. CYC will continue to improve emissions from lower frequency services and strive to maximise the number of services operating fully electric buses to further reduce exhaust emissions. It remains CYC's ambition to pursue an all-electric bus fleet within the city. Further measures to tackle emissions from buses are included in AQAP4
AQAP3 (6) Overall Emission Impact = Green	Development and implementation of Low Emission Planning guidance	Policy guidance and development control	Air quality planning and policy guidance	2015	2024	CYC	CYC	NO	Funded	£10k - 50k	Implementation	Aims to minimise additional emission impact of development across the entire York area. Emission savings generally calculated and reported per development.	Number of publicly accessible EV parking bays available in York (some deliverable via the planning process)	Low Emission Planning Guidance has been developed to accompany policy ENV1 'Air Quality' of the Local Plan. The guidance outlines CYC's design and mitigation expectations for all new developments in the city, including EV charging. The guidance note was last updated in June 2022 to reflect changes to Building Regulations as outlined in 'Approved Document S: Infrastructure for the charging of electric vehicles'. Further updates to this guidance note are proposed in AQAP4.	In line with CYC guidance, developers are required to demonstrate how they are mitigating site emission 'damage costs' via the implementation of suitable mitigation measures. Idling Management Plans now required for some sites, such as drive through food retail establishments, where there is the potential for

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	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
															customers to sit in parked vehicles with engines running.
AQAP3 (7a) Overall Emission Impact = Amber	Reducing emissions from taxis (financial incentives for low emission taxi purchase)	Promoting low emission transport	Taxi emission incentives	2015	2024	CYC	CYC and DEFRA Grant	YES	Funded	£100k - £500k	Implementation	A hybrid taxi produces approximately 8t per annum of CO_2 less than a diesel equivalent and has considerably lower emissions of NO_x and PM. Electric taxis eliminate tailpipe emissions of NO_x and PM	Number of low emission taxis purchased / supported through the local grant scheme	CYC's first incentive scheme was launched in 2015/16 and provided financial assistance to CYC licensed taxi drivers to purchase low emission taxis. CYC was awarded additional DEFRA AQ Grant funding in March 2020 to continue the incentive scheme in 2020/21. The new scheme was formally launched on 10th November 2020. At the end of 2023, CYC had supported 34 taxi drivers with vehicle upgrades and operational costs. Details of the scheme can be viewed at Low Emission Taxi Grant Scheme.	Further measures to tackle emissions from taxis are included in AQAP4. Current grant funding has now run out.
AQAP3 (2) Overall Emission Impact = Amber	Anti-idling measures	Traffic Management	Anti-idling enforcement	2015	2024	CYC	CYC and DEFRA Grant	YES	Funded	£10k - 50k	Implementation	From feasibility report done by TTR Ltd - at 5 busiest service bus locations, estimated savings per annum of 1,526kg NO_x, 36kg PM_{10}, 46,555kg CO_2,and 17,949 litres of fuel.	Estimate of idling time saved	CYC continued to promote its 'Kick the Habit' anti-idling campaign throughout 2023 and worked with partners including schools and businesses to reduce the incidence of vehicle idling across the city. Further promotion of the campaign was also undertaken for Clean Air Day 2023. Work in 2023 reinforces action in previous years, including the erection of permanent signage in all council owned car parks across the city, at most city centre bus stops, multiple taxi ranks and at other key locations across the city. Information about the campaign can be found on CYC's Kick the Habit Webpage Public Protection Support Officers (PPSOs) assisted with ongoing awareness raising and idling patrols throughout 2023.	To date CYC has not had to serve any Fixed Penalty Notices (FPNs) specifically for idling. A Fixed Penalty Notice will only be issued if a vehicle has been observed idling on the public highway for more than two minutes (without reasonable cause) and the driver refuses to switch their engine off when asked. The legislation only applies to the public highway and not to private land, such as car parks. It is also not applicable to vehicles waiting in a queue of traffic, unless there's an obvious source of prolonged delay, such as a level crossing or an incident that's blocking the highway. Drivers' are also allowed a reasonable period in which to defrost their vehicles to a safe level during periods of cold weather. With respect to buses, condition 2 of the CAZ Traffic Regulation

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	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
															Condition (see AQAP measure 1) prohibits buses from idling their engines anywhere within the affected CAZ area for more than 2 minutes. This condition applies to all local bus services operating within the affected streets irrespective of service frequency or engine type. Further measures to tackle emissions from idling vehicles are included in AQAP4.
AQAP3 (3) Overall Emission Impact = Amber	Further development of ECO-Stars Fleet Recognition Scheme	Vehicle Fleet Efficiency	Fleet efficiency and recognition schemes	2015	2018	CYC	DEFRA Grant	YES	Funded	£10k - 50k	Completed	A typical van operator could see its annual output of carbon dioxide fall by six tonnes per year (see http://www.ecostars-uk.com/about-eco-stars/why-join/)	Number of operators signed up to the scheme	ECO-Stars scheme launched March 2013. CYC is not currently actively recruiting new members to the York scheme as funding expired in November 2018, but throughout the project CYC recruited 106 members to the scheme.	CYC will explore further opportunities for promoting operational best practice with operators / businesses as part of ongoing work to address emissions associated with freight movements and deliveries in York. Further measures to tackle these emissions are included in AQAP4.
AQAP3 (4) Overall Emission Impact = Amber	Planning and delivery of CNG refuelling infrastructure	Promoting Low Emission Transport	Procuring alternative refuelling infrastructure to promote Low Emission Vehicles, EV charging, Gas fuel recharging	2015	2021	CYC and third party investment (to be identified)	Subject to third party investment	YES	Partially Funded	£10k - 50k	Aborted	Detailed emission savings were to be determined at planning application stage, but this measure is no longer being progressed	-	CNG feasibility study completed in 2013. Potential site identified based on location of high-pressure gas mains to the south west of the city. However, this location is designated greenbelt and line with local air quality and carbon reduction aspirations, promotion of hydrocarbon based fuels is no longer considered appropriate for subsequent AQAPs. This action will not be progressed. Recent research has shown that vehicles fuelled by CNG may emit especially large numbers of ultra-fine particles, with the highest particle number emissions measured during urban driving (i.e. low speeds, cold-starts) which has implications for York's city centre environment and fine particulate exposure reduction targets (Environment Act 2021).	Note that estimated cost of £10-£50k was for the feasibility study and not the implementation of a CNG refuelling facility

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	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
AQAP3 (5) Overall Emission Impact = Green	Freight delivery and service plan for key city centre retailers and streets.	Freight and delivery management	Delivery and service plans	2015	2024	CYC	CYC and DEFRA Grant	YES	Partially Funded	£100k - £500k	Planning	To be determined	To be determined	CYC was awarded additional DEFRA funding in March 2021 to carry out a feasibility study and subsequent pilot scheme to reduce emissions relating to freight deliveries travelling in to and out of York (see update for measure 5a).	Depends on external investment and planning process. Estimated cost includes feasibility and pilot study only. Further measures to tackle emissions from freight / delivery vehicles are included in AQAP4.
AQAP3 (5a) Overall Emission Impact = Green	Freight consolidation Centre	Freight and delivery management	Freight consolidation centre	2015	2024	CYC and third-party investment (to be identified)	CYC and DEFRA Grant	YES	Partially Funded	£1 million - £10 million	Planning	To be determined	Number of city centre businesses using consolidation centre.	CYC was awarded DEFRA funding in March 2021 to carry out a feasibility study and subsequent pilot scheme to reduce emissions relating to freight deliveries travelling in to and out of York. The initial feasibility work aimed to more precisely quantify the emission / air quality impact of freight deliveries in the city and identify suitable sustainable alternatives, which may include a delivery 'hub' allowing the last or first mile of the journey to be made by low emission modes, including e-cargo bikes. As part of this work, CYC has engaged with businesses, including delivery companies, on the initial feasibility work and proposed pilot scheme. The initial feasibility study was completed December 2021 although the pilot project has been delayed due to CYC's primary delivery partner withdrawing from the project. CYC has identified a base for the hub pilot, which is expected to progress in 2024 subject to a suitable delivery partner being found.	The delivery of a permanent freight consolidation centre is subject to third party investment / participation and a suitable site. CYC's ambition is that a sustainable model can be found to allow the operation to continue post pilot. Further measures to tackle emissions from freight / delivery vehicles are included in AQAP4.
AQAP3 (7b) Overall Emission Impact = Amber	Reducing emissions from taxis (taxi licensing emissions controls)	Promoting low emission transport	Taxi licensing conditions	2015	2024	CYC	CYC	NO	Funded	< £10k	Implementation	Not yet quantified	% of ultra-low emission Licensed Taxis operating in York (Electric and Hybrid) At Dec 2023 this was 36.9%	In October 2022, CYC Licensing and Regulatory Committee approved the issuing of ten new hackney carriage vehicle licences to wheelchair accessible vehicles, which are also fully electric or plug in electric hybrid (e.g. LEVC TX). Updates to CYC's Taxi Licensing Policy currently in progress. Updates to this policy will specify the types of vehicles that CYC will license as taxis in the future. Changes to Licensing Policy will be progressed in full consultation with the trade, including representatives of each registered Hackney Carriage and Private Hire Association.	Operators may experience some increased vehicle replacement costs as only modern vehicles meeting the required standards are proposed to be licensed as taxis in York. However, national / local government grants can be used to offset the purchase price of replacement vehicles. A DEFRA Air Quality grant allocation was awarded to CYC in 2020 to assist with further taxi upgrades (see update for

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	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
															AQAP3 Measure 7a) Further measures to tackle emissions from taxis are included in AQAP4.
AQAP3 (8) Overall Emission Impact = Amber	Planning and delivery of strategic EV charging network	Promoting Low Emission Transport	Procuring alternative refuelling infrastructure to promote Low Emission Vehicles, EV charging, Gas fuel recharging	2015	2024	CYC	CYC	NO	Funded	£1 million - £10 million	Implementation	-	The number of CYC electric vehicle recharging points in York (at Dec 2023 this was 103)	EV charging previously provided at 12 hotels in conjunction with Zero Carbon World who provided grants for the installations. CYC Public EV Charging Strategy approved March 2020. CYC intends to deliver an updated Public EV Charging Strategy by 2025, to ensure we continue to provide a robust and fit for purpose future EV charging network across York. Implementation of an extensive 'pay as you go' fast charge public electric vehicle recharging network. Upgrades to charging facilities were progressed in 2023. The number of charging episodes reported in the city for 2023 was 36,219 Two HyperHub EV charging sites are now operational (Poppleton Park and Monks Cross).	Lack of off-street parking is a significant barrier to the uptake of EVs, as the prevailing model for domestic charging involves parking off-street (on a driveway or in a garage) and charging vehicles overnight on a domestic trickle charge. This is a particular issue in York due to high proportions of terraced housing with no off-street parking. In addition, new flatted developments present additional challenges for EV charging due to power management issues and potentially costly supply upgrades. The ultra-rapid HyperHub facilities are aimed at improving recharging facilities for owners of electric vehicles. especially those without off-street parking. CYC is committed to exploring future options for on-street charging. The CYC charging network is complemented by several commercial providers. Residents and visitors can use ZapMap to find

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	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
															the charging options available to them.
AQAP3 (9a) Overall Emission Impact = Amber	Reducing CYC 'grey fleet' trips	Alternatives to private vehicle use	Car clubs	2015	2024	CYC	CYC	NO	Funded	£50k - £100k	Implementation	-	Reduction in annual business mileage	CYC, working in partnership with Enterprise Car Club, provide a range of pool vehicles at various locations near West Offices (Main CYC HQ), Hazel Court and across the city which can be booked online and accessed via a smart membership card. The vehicles available come in a range of sizes and transmission variations so there is something to suit every type of driver. A number of existing diesel pool cars have been replaced with low emission Yaris Petrol Hybrid vehicles as part of the car club initiative.	CYC membership of car club has significantly reduced the number of people using their own private vehicles on CYC business. Further measures to maximise CYC journey efficiency (and minimise emissions) through use of telematics, training and sustainable travel options for staff are included in AQAP4.
AQAP3 (9b) Overall Emission Impact = Amber	Introduction of low emission vehicles into CYC fleet	Promoting Low Emission Transport	Company vehicle procurement – prioritising uptake of low emission vehicles	2015	2025	CYC	CYC	NO	Partially Funded	£1 million - £10 million	Implementation	CYC aims to replace 153 vehicles from its current fleet, reducing CO_2 emissions by a third. The entire fleet emits a total of 1,763 tonnes of CO_2 each year.	% of ultra-low emission vehicles in CYC Fleet, operating in York At Jan 2024, the % of fully electric cars / LGVs (<3.5T) in the CYC Fleet was 42%.	Progressing the transition to an electric fleet for all vehicles under 3.5 tonnes as part of a four-year programme. Major infrastructure upgrades were progressed at CYC's Hazel Court ECO Depot site throughout 2022 and 2023 to facilitate the introduction of EV charging facilities for operational fleet vehicles. Officers are also exploring options for vehicles over 3.5 tonnes to move away from diesel as a fuel. All depot staff undertaken mandatory Alternative Fuel Vehicle (AFV) training which included information on local air quality and health impacts to raise awareness of air quality issues across the CYC workforce. With respect to waste collection, twelve new refuse trucks, including two fully electric vehicles, have been bought by CYC. The new vehicles will reduce fuel costs and pollution output by approximately 16%.	Further measures relating to improvements to CYC fleet vehicles are included in AQAP4.
AQAP3 (9c) Overall Emission Impact = Amber	CYC Eco-driver training and vehicle emission controls	Vehicle Fleet Efficiency	Driver training and Eco aids	2015	2021	CYC	CYC	NO	Funded	£10k - 50k	Completed	-	Number of CYC staff obtaining ECO driver training	Lightfoot trial completed, Fuel additive trial completed, Programme of mandatory HGV driver training completed (including eco-driving element). In mid-2021, CYC implemented a Masternaut telematics system for fleet vehicles to improve safety, reduce emissions and improve vehicle and driver efficiency.	Ongoing programme of driver training, including mandatory 'Alternatively Fuelled Vehicles' training for all staff.
AQAP3 (10) Overall Emission Impact = Amber	Marketing and Communication Strategy	Public Information	Via the Internet	2015	2024	CYC	CYC and DEFRA Grant	YES	Funded	£10k - 50k	Implementation	Difficult to quantify exact emission savings as measures aimed at preventing idling / air quality	Number of visitors to website per annum / Idling time saved	Ad-hoc public communication work ongoing, including ongoing updates to CYC's air quality web pages. 'Kick the Habit' anti-idling awareness raising campaign was launched in mid-2019. Campaign posters have been put up in doctors' surgeries and petrol stations in York.	Anti-idling awareness / enforcement patrols are undertaken by staff in Public Protection in response to

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	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
												awareness / education		Permanent signage has also been erected in all CYC owned car parks, at most city centre bus stops, multiple taxi ranks and at other key locations across the city where vehicles have been observed idling. Promotion undertaken for Clean Air Day in June 2023 In early 2023, CYC was awarded further DEFRA Air Quality Grant funding to improve public awareness of domestic solid fuel burning practices, particulate emissions and associated health impacts. 'Fuel for Thought' launched in November 2023. Compliance checks across key solid fuel distribution outlets continued in 2023 to ensure that all solid fuels being sold were certified as 'Ready to Burn' in line with the Air Quality (Domestic Solid Fuels Standards) (England) Regulations 2020. In October 2023, CYC contacted over 350 farmers to highlight resources and grant opportunities available to assist in adopting best practice with respect to reducing ammonia and particulate emissions.	persistent complaints of idling in specific areas. Further measures around improved public information and awareness are included in AQAP4
AQAP3 (11a) Overall Emission Impact = Amber	Local incentives for low emission vehicles and alternative fuel use – EV chargers and business demonstrators	Promoting Low Emission Transport	Company Vehicle Procurement – Prioritising the uptake of low emission vehicles	2015	2019	CYC	CYC and DEFRA Grant	YES	Funded	£10k - 50k	Completed	-	Number of businesses that have installed EV charging	CYC has provided advice to other local authorities regarding the operation of electric vehicles and the installation of charging infrastructure within their areas, including Selby District Council and Oxfordshire County Council. CYC has previously facilitated the installation of EV charging infrastructure in a number of business premises. CYC is also supporting the uptake of low emission taxis through the local Low Emission Taxi Grant scheme (see measure AQAP3 7a)	CYC provides ongoing advice on EV charging to local businesses and other local authorities. Further measures around local incentives for low emission vehicles / modes are included in AQAP4
AQAP3 (11b) Overall Emission Impact = Amber	Local incentives for low emission vehicles and alternative fuel use – Priority parking / reduced parking fees for low emission vehicles	Promoting Low Emission Transport	Priority parking for LEVs	2015	2024	CYC	CYC	NO	Funded	£10k - 50k	Implementation	-	Number of low emission permits issued	CYC continued to issue Low Emission Permits (including Household Low Emission Permits) throughout 2023. See https://www.york.gov.uk/LowEmissionParking	CYC will periodically review the local definition of 'low emission vehicle' in the context of local parking discounts, to ensure that incentives remain appropriate and deliver continuous improvement in air quality. Further measures around local incentives for low emission vehicles / modes are included in AQAP4

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	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
AQAP3 (12) Overall Emission Impact = Amber	Attracting Low Emission industries, businesses and jobs to York	Policy guidance and development control	Other policy	2015	2024	CYC	CYC	NO	Funded	£10k - 50k	Implementation	Not quantifiable	Advice provided	Provided advice to business on low emission technologies/solutions as required.	Will support wider air quality improvement measures across the city
AQAP3 (13a) Overall Emission Impact = Green	Modal shift and network improvement measures (i-Travel York campaign)	Promoting Travel Alternatives	Intensive active travel campaign & infrastructure	2015	2024	CYC	DfT / Local Sustainable Transport Fund	NO	Funded	£1 million - £10 million	Implementation	Hard to precisely quantify but target to increase modal shift away from conventional car	% mode split or walking/cycling/bus vs conventional car drivers and car passengers % trips into city centre	Ongoing delivery of i-Travel York sustainable travel programme - see https://www.itravelyork.info/news for further details and current updates. The iTravel Team work to bring about travel behaviour change in York, through increased sustainable travel. BetterPoints is an app that people in York can download to be rewarded with points for their walk/wheeling, cycle and bus journeys, which can be redeemed with vouchers for shopping, drinks and even charity donations. Events promote sustainable travel, such as the York Walking Festival (Sept 2023), Walk to School Week and journey advice at community/employment sites. Resources, such as cycle videos, cycle map and walk leaflets enable people to travel sustainably. The Active Travel Ambassador programme, run by Modeshift, encourages secondary school children to find ways to make the school run sustainable. The cycle training provided by the Road Safety Team is an important offer that iTravel raise awareness of. The iTravel Team also support travel plans in the city – documents, often done through the planning process, that set out how an organisation will increase the sustainable travel it makes and reduce car journeys. Residential travel plans are a big part of this and the iTravel Team have recently set up a scheme to provide cycle vouchers, bus passes and car club offers at new residential estates, using section 106 funding.	The i-Travel York programme was established following a successful bid for funding from the DfT's Local Sustainable Transport Fund. The programme has been delivering an integrated programme of personal, business and school travel planning, combined with targeted infrastructure enhancements to increase people's travel choices since 2012. I-Travel York aims to inspire people in York to help look after our city - to keep it moving and keep the air clean - by considering travel options before making a journey.
AQAP3 (13b) Overall Emission Impact = Green	Modal shift and network improvement measures (Bus Improvements)	Transport planning and infrastructure	Public transport improvements interchanges, stations and services	2015	2025	CYC	CYC/DfT	NO	Funded	> £10 million	Implementation	Aim to increase uptake of public transport	National Annual Passenger satisfaction survey	CYC and bus operators have worked together to improve York's bus network in previous years through the York Quality Bus Partnership. Innovations in York have included improvements to bus information, including new on-street timetables and more real time displays; two new park and ride sites at Askham Bar and Poppleton Bar; fare reductions and new tickets; improvements to well used bus stops in the city centre including Museum Street and Exhibition Square; new electric buses on park and ride services; introduction of refurbished electric open-top buses on the City Sightseeing tour service ; new vehicles and higher frequencies on some existing services; introduction of a multi-operator "All York" ticket and a smartcard ticket; the introduction of two "Bus Wardens" and the bus enquiry desk at the Railway Station to help passengers. CYC published its Bus Service Improvement Plan (BSIP) in October 2021. The plan, a document required by the government's Department for Transport (DfT) National Bus Strategy published in March 2021, reflects	See York Bus Service Improvement Plan (BSIP) York Enhanced Partnership for Buses formally came into effect on 27th Sept 2022. This will act as the principal delivery body for the £17.36m BSIP funding. Delivery of the BSIP forms a measure in AQAP4

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	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
														the key priorities for improving bus services across the city. A statutory Enhanced Partnership between CYC and local bus operators was made by officers on 27th September 2022; this is a prerequisite to secure the confirmed £17.36 million in BSIP funding from DfT. This award is in addition to £8.4m ZEBRA (Zero Emission Bus Regional Area) funding allocated to the council. BSIP funding will be used to implement a range of improvements to the city's bus network and associated infrastructure between 2022 and 2025	
AQAP3 (13c) Overall Emission Impact = Green	Modal shift and network improvement measures (Other LTP measures)	Transport planning and infrastructure	Other	2015	2024	CYC	CYC / West Yorkshire Plus Transport Fund / DfT	NO	Funded	£500k - £1 million	Implementation	-	Concentration reduction target in LTP3 and AQAP3	Measures in LTP3 (published 2011) can be viewed online at Local Transport Plan (Also see updates against measure 13b). Funding obtained to deliver major schemes for York Central, increasing the capacity of the A1237 (between the A19N and Hopgrove roundabout junctions) and improve the area in front of York Station. LTP4 currently in development. In February 2023, CYC developed a draft Local Transport Strategy, that set out high level principles and priorities for York that will underpin future transport strategies. See 'Our Big Transport Conversation'	The York Outer Ring Road (YORR) project has been underway since 2017 when CYC were allocated approximately £38m for improvements to the A1237 using funds from the West Yorkshire Plus Transport Fund. This funding was for upgrades of 7 roundabouts from Wetherby Road to Monks Cross. In early 2019 the upgrade of the A1237/B1224 Wetherby Road roundabout was completed. In October 2019 the Department for Transport awarded CYC £26m from its Major Road Network fund to dual the Outer Ring Road from A19 Rawcliffe (Shipton Road) roundabout to A1036 Little Hopgrove (Malton Road) roundabout.
AQAP3 (14) Overall Emission Impact = Amber	Other air quality improvement measures (non-transport sources)	Environmental Permits	Introduction/Increase of Environment charges through permit systems and economic instruments	2015	2024	CYC	CYC	NO	Funded	£10k - 50k	Implementation	-	Number of scheduled inspections completed per annum	Enforcement of relevant air quality legislation is currently undertaken by the Environmental Protection team. Estimated cost of measure is staffing resource but this will be offset by permit costs.	Additional measures to tackle non-transport sources are included in AQAP4
AQAP3 (15) Overall Emission Impact = Red	Provide more green infrastructure	Policy Guidance and Development Control	Other policy	2015	2024	CYC	CYC	NO	Partially Funded	£100k - £500k	Implementation	-	Trees planted	Protecting and enhancing York's natural environment is a key influence and delivery mechanism in the Council's 10 year strategies and York 2032:10 year plan. York's natural environment is a key component for meeting the city's requirements for climate change, particularly	For further details see: Green Infrastructure Strategy and

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	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
														relating to our Climate Emergency which set an ambition for York to be a net-zero carbon city by 2030. CYC has a dedicated 'Green Streets' project team working to increase the tree canopy cover across York. The council has set a target to increase York's tree canopy to 13% by 2050 and is working with schools and communities to deliver this ambition.	York Community Woodland
16 Overall Emission Impact = Red	Further conversion of diesel double decker tour buses to electric	Vehicle Fleet Efficiency	Vehicle Retrofitting programmes	2014	2019	CYC	DfT Clean Bus Technology Fund	NO	Funded	£100k - £500k	Completed	The 4 electric buses used in York reduced tailpipe emissions in the city	Number of buses converted to electric	CYC made a bid to DfT's Clean Bus Technology Fund (CBTF) in 2013 for funds to convert six open-top buses used on York's City Sightseeing tour service from diesel engines to fully electric. Four buses were converted and entered service under this programme. The remaining 2 buses were not converted due to the performance of the retro-fitted electric buses on the ground not meeting an acceptable threshold of reliability, causing operational issues for the service. CYC's experience was not unique in this respect, with a project at another historic UK city suffering problems with the supply of retro-fitted electric buses, similar to those in York. Although the York trial was not successful in meeting its primary objective, it has been successful in delivering against other objectives. It allowed a five year trial of retro-fitted buses, which has yielded much useful data in the development of subsequent electric bus projects. Use of the electric buses in York has both led to investment in the P&R fully electric bus fleet and Transdev's electric bus fleet in Harrogate. York and Harrogate now have some of the most intensively used electric buses in the UK and use of the new, as opposed to retrofitted, electric buses has been entirely successful.	York's Clean Air Zone means that it is not now possible to use the previous fleet of older diesel buses on the City Sightseeing Tour service. After 31/01/2021 this service needed to be Euro VI diesel or better to achieve compliance with the CAZ.
17 Overall Emission Impact = Amber	Retrofitting of school buses	Vehicle Fleet Efficiency	Vehicle Retrofitting programmes	2016	2022	CYC	DfT Clean Bus Technology Fund	NO	Funded	£100k - £500k	Completed	-	Number of retrofitted school buses	Following the withdrawal of the Clean Vehicle Retrofit Accreditation Scheme (CVRAS) certification for the primary vehicle retrofit manufacturer, no further vehicles were retrofitted although York Pullman invested £1.2m in new vehicles in the previous reporting year of 2021. CYC will continue to drive improvements in emission standards through contractual arrangements for school buses (and taxis).	Clean Bus Technology Funding of £308K previously obtained to support this measure
18 Overall Emission Impact = Red	Solar panels at electric P&R sites	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2017	2021	CYC	European Regional Development Fund (ERDF)	NO	Funded	£1 million - £10 million	Completed	-	Amount of energy generated by solar panels	CYC secured European funding (ERDF) to allow the delivery of a full solar canopy/battery storage solution in addition to the proposed charging points at Monks Cross and Poppleton Bar. Planning applications for the new ultra rapid charge units and solar canopies were approved in November 2019. The solar canopies have a generation capacity of up to 400kW powering a mix of charge points.	-
19 Overall Emission Impact = Amber	Hyper Hubs	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2016	2023	CYC	CYC and OLEV	NO	Funded	£1 million - £10 million	Completed	-	Number of charging episodes at hyper hubs	Two Hyper Hub sites now fully operational at Poppleton and Monks Cross. Both Hyper Hub sites contain 4 ultra-rapid (175kW) and 4 Rapid (50kW) vehicle chargers, helping to support the uptake of modern electric vehicles that have larger battery capacities and are capable of ultra-rapid charging. HyperHubs have been part funded by Office for Low Emission Vehicles and the European Regional Development Fund. CYC is	The CYC operated network is complemented by several commercial providers. Details of all charge points in the city can be

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	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
														currently working on a third city centre site. See https://www.york.gov.uk/hyperhubs	viewed using ZapMap

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

As detailed in Policy Guidance LAQM.PG22 (Chapter 8) and the Air Quality Strategy[7], local authorities are expected to work towards reducing emissions and/or concentrations of fine particulate matter ($PM_{2.5}$). There is clear evidence that $PM_{2.5}$ (particulate matter smaller 2.5 micrometres) has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases.

The Public Health Outcomes Framework includes an indicator relating to the fraction of mortality attributable to particulate pollution. This indicator enables Directors of Public Health to prioritise action on air quality in their local area to help reduce the health burden from air pollution. Indicator D01 'Fraction of mortality attributable to particulate air pollution' is defined as the fraction of annual all-cause adult mortality attributable to particulate air pollution (measured as fine particulate matter, $PM_{2.5}$), expressed as the percentage of annual deaths from all causes in those aged 30+.

It is estimated that long-term exposure to air pollution (specifically, $PM_{2.5}$) was a contributory factor to the cause of death in 4.6% of deaths in York in 2022 (latest data available at the time of writing). This figure is less than the figure reported for the wider Yorkshire and Humber region in 2022 (5.1%) and less than the average figure reported for England in 2022 (5.8%).

It is widely accepted that fine particulate matter has a significant impact on both morbidity and mortality and diesel emissions have been classified as carcinogenic by the International Agency for Research on Cancer (part of the World Health Organisation). There is particular concern about the 'black carbon' fraction of particulate matter due to its health impacts, and its strong ability to absorb light energy and increase global warming. Black carbon emissions in urban environments arise predominantly from diesel transport, but are also a product of biomass combustion, used increasingly for energy production and space heating.

Emissions of oxides of nitrogen (NO_x) and man-made particulate must be reduced to meet the health based national air quality objectives in York and improve public health.

[7] DEFRA. Air Quality Strategy – Framework for Local Authority Delivery, August 2023

To date CYC has produced two trip reduction / modal shift based Air Quality Action Plans (AQAPs) and in 2015 adopted a third Action Plan (AQAP3) focussing on reducing vehicle tailpipe emissions from the remaining vehicle fleet through the use of low emission technologies. In 2023/24 CYC consulted on an updated Action Plan (AQAP4) that outlines the action CYC will take to further improve air quality in York over the next 5 years to go beyond health-based National Air Quality Objectives in all areas and work towards meeting World Health Organisation (WHO) Air Quality Guidelines. AQAP4 aims to reduce concentrations of air pollutants and exposure to air pollution, thereby improving the health and quality of life of residents and visitors to York. AQAP4 recognises that there are no 'safe' limits for particulate emissions, particularly $PM_{2.5}$. The maximum concentration of $PM_{2.5}$ monitored in York in 2023 was 8.0µg/m^3 at the Fishergate site.

CYC is demonstrating a commitment to addressing $PM_{2.5}$ through measures in its Air Quality Action Plan and wider associated strategies. Some specific items related directly to reducing fine particulate emissions (and indeed related to reducing exposure to such emissions) are described below:

- **Exposure Reduction through the Planning Process [Measure AQAP3(6)]** - Air quality staff routinely comment on planning applications to ensure that new developments are designed in a way which minimises exposure to air pollution and further emission growth. The most recent approach requires developers to calculate the damage costs of the additional emissions that their developments will cause and to mitigate this using a range of sustainable transport and low emission vehicle measures. Such measures must be considered reasonable and proportionate, relative to the damage costs associated with the development. Pre-planning advice is often provided on locations for key exposure sites (e.g. housing, schools, sports facilities, medical facilities etc.) and the use of biomass heating systems is generally discouraged in urban areas and near sensitive receptors.
- **Policy Led Exposure Reduction [Links to various AQAP3 measures]** – CYC's Public Protection team work alongside other council departments with joint inputs into key council policies that can impact on air quality and exposure reduction. Examples of previous joint policies include the Local Transport Plan / Strategy, Local Plan, Climate Change Strategy, Air Quality Action Plan and Low Emission Strategy. Work continues to strengthen links between air quality and the Health and Wellbeing Strategy. In 2019, CYC announced a Climate Emergency and have since set an ambition for CYC to reduce its carbon emissions to net zero by 2030. CYC recognise the threat of climate

change at both a global and local scale, and are committed to delivering bold, local climate action to deliver economic and social benefits, such as new green jobs, economic savings, market opportunities and much improved well-being for York residents. Air quality improvement strategies in York complement the wider climate change/carbon reduction agenda and are well aligned to recognise synergies and prevent conflict.

- **Information Led Exposure Reduction [Measure AQAP3(10)]** - at the present time there is no single marketing and communications strategy at a national level to deal with dissemination of public information on the links between health, air quality and transport. Acting as part of the Low Emission Partnership (alongside Bradford Metropolitan District Council and Lancaster City Council), CYC obtained DEFRA AQ Grant funding to develop a new Air Quality Knowledge Hub. Focused on information exchange between local authority professionals, the Hub features a range of content areas related to air quality improvement measures that local authorities can adopt, as well as more specific practitioner advice notes that focus on various aspects of local air quality management, planning, monitoring and enforcement. The Hub also includes a growing library of relevant case studies and a forum to facilitate discussion and information exchange. It was also updated in 2023 to include a dedicated resource area for hosting communication materials arising from DEFRA funded Air Quality Grant Projects. CYC has also undertaken promotional work in relation to anti-idling as part of Clean Air Day and raised awareness of the links between idling emissions, air quality and health impacts.

  In early 2023, CYC was awarded further DEFRA Air Quality Grant funding to improve public awareness of domestic solid fuel burning practices, particulate emissions and associated health impacts. We undertook research via a online survey and hosted a number of focus groups with the local community to inform the creative route for the campaign, which was launched in November 2023. Details of the 'Fuel for Thought' campaign can be found online.

  Additionally in 2023, CYC was awarded DEFRA funding to develop an online air pollution forecasting and notification service to allow residents and visitors to York to access information that allows them to minimise their own exposure when pollution episodes are forecast. The York Air Alert service is of particular benefit to anyone who suffers from health conditions exacerbated by poor air quality. The service provides a

3-day forecast of air pollution with 8 zones of York. The service is free to subscribe to and provides notifications via email, text and voicemail to users.

- **Low Emission Vehicle Upgrades [AQAP3 Measures 16 & 17]** – In August 2023, First Bus together with CYC 'switched on' a new fleet of zero emission buses for York in a transformation that will see the York bus depot become one of the first outside London to be fully electric. With these additional vehicles, the First York bus fleet will become fully electric by the end of 2024, significantly reducing carbon, NO_x and particulate emissions across the city. The new buses, supported by funding through DfT's Zero Emission Bus Regional Areas (ZEBRA) scheme, complement the existing electric buses serving York's Park and Ride sites. CYC has also been awarded additional funding to support the development of key schemes and initiatives in line with York's Bus Service Improvement Plan (BSIP), including wider electrification of the urban bus fleet, bus priority measures, improvements to stops, shelters and passenger information. The York Enhanced Partnership for Buses will act as the principal delivery body for the BSIP funding until 2025.
- **Clean Air Zone [Measure AQAP3(1)]** – The Clean Air Zone (CAZ) for buses in the city centre was launched on 31st January 2020. Buses making 5 or more entrances to the CAZ per day are now required to be low emission (Euro VI diesel or electric). A total of £1,654,000 was allocated by CYC to 5 bus operators to help replace/retrofit 93 buses that pass through the city centre Air Quality Management Area (AQMA). Low / zero emission buses will reduce the amount of fine particulate (as well as NO_x) emitted in the city.
- **Low Emission Taxis [Measure AQAP3(7)]** – York has previously pioneered a taxi grant scheme aimed at encouraging taxi drivers to move away from diesel/petrol to petrol hybrid and electric taxis. Further funding was awarded to York under DEFRA's 2019/20 Air Quality Grant Scheme to accelerate the transition to electric and other ultra-low emission taxis. Through the taxi incentive scheme and changes to Taxi Licensing Policy, the number of low emission (fully electric or electric hybrid) taxis in the York fleet has been increased to approximately 37% (figure correct as of end December 2023). Traditional petrol hybrid, plug-in hybrid and electric cars produce significantly lower tailpipe emissions than diesel equivalents.
- **Low Emission Vehicle Events** – In previous years, CYC has held various Low Emission Vehicle events for the public to showcase a variety of electric cars and bikes.

- **Clean Air Act / Smoke Control Areas** – Under the requirements of the Clean Air Act, certain areas of York have been designated Smoke Control Areas (SCAs), where emissions of smoke from chimneys of domestic properties are prohibited. CYC continue to enforce existing smoke control areas to reduce particulate emissions and nuisance. In 2023, we developed a new Enforcement Protocol for civil penalties for smoke emissions within Smoke Control Areas (under the Clean Air Act 1993, as amended by the Environment Act 2021). This protocol is subject to member decision in 2024. CYC also undertakes seasonal promotion of the rules around SCAs and issued advice and guidance to residents on the use of appropriate fuels and maintenance of appliances in line with the Government's national 'Burn Better' campaign. This promotional work accompanies compliance checks across retailers within CYC's area to ensure that all solid fuels being sold are certified as 'Ready to Burn' in line with the Air Quality (Domestic Solid Fuels Standards) (England) Regulations 2020. As mentioned above, CYC has also launched a DEFRA funded campaign specifically aimed at improving public awareness of domestic solid fuel burning practices, particulate emissions and associated health impacts.
- **First/last mile delivery options** - City of York Council was awarded £297,237 by DEFRA in March 2021 to carry out a feasibility study and subsequent pilot scheme to reduce emissions relating to deliveries travelling in to and out of York. The project will focus on how to reduce the number of deliveries made to the city centre and around York by LGVs and HGVs. This will directly reduce particulate and other emissions. Unfortunately, this project has been significantly delayed to staff shortages and withdrawal of CYC's primary delivery partner for the pilot. It is hoped to progress this project in 2024.

Throughout 2023, CYC's Director of Public Health and colleagues in the Public Health team have been involved in in the development of AQAP4 and delivery of air quality improvement measures. CYC maintain good contacts within the sustainability team at the York and Scarborough NHS Trust and have delivered a number of joint Clean Air Day awareness raising events in partnership with them.

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

This section sets out the monitoring undertaken within 2023 by City of York Council (CYC) and how it compares with the relevant air quality objectives. In addition, monitoring results are presented for a five-year period between 2019 and 2023 to allow monitoring trends to be identified and discussed.

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

CYC undertook automatic (continuous) monitoring at 9 sites during 2023. Table A.1 in Appendix A shows the details of the automatic monitoring sites. NB. Local authorities do not have to report annually on the following pollutants: 1,3 butadiene, benzene, carbon monoxide and lead, unless local circumstances indicate there is a problem. The Air Quality England page presents automatic monitoring results for CYC's area, with automatic monitoring results also available through the UK-Air website.

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

Whilst there have been no significant changes to CYC's overall automatic monitoring strategy (in terms of monitoring locations) in the last 12 months, the following upgrades have occurred to ensure compliance with LAQM requirements. Note that the pollutants monitored are the same, with the exception of Holgate Road which now monitors $PM_{2.5}$ instead of PM_{10}.

- Gillygate - upgrade to NO_x analyser (Thermo 42i NO_x) and $PM_{2.5}$ monitor (Thermo 1405F $PM_{2.5}$)
- Lawrence Street – upgrade to enclosure, A/C and NO_x analyser (Thermo 42i NO_x)
- Holgate Road – upgrade to enclosure, A/C, NO_x analyser (Thermo 42i NO_x) and $PM_{2.5}$ monitor (Thermo 1405F $PM_{2.5}$)

3.1.2 Non-Automatic Monitoring Sites

CYC undertook non- automatic (i.e. passive) monitoring of NO_2 at 233 sites (including blank) during 2023. Table A.2 in Appendix A presents the details of the non-automatic sites.

Maps showing the location of the monitoring sites are provided on City of York Council's website. 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, 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.3 and Table A.4 in Appendix A compare 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 2023 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.

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

The highest annual mean concentration of NO_2 recorded at a location representative of long-term public exposure in 2023 was 43µg/m^3 near the junction of Gilllygate and Bootham (Diffusion tube reference A1).

Improvements in annual mean NO_2 monitored at roadside continuous monitoring stations were observed between 2022 and 2023 at Fishergate (10% improvement), Nunnery Lane (7% improvement), Gillygate (7% improvement), Lawrence Street (8% improvement) and Heworth Green (13% improvement). Annual mean NO_2 monitored at Holgate Road and Fulford Road in 2023 was broadly comparable to that monitored in 2022 (~1% change).

Annual mean background concentrations of NO_2 monitored at Bootham Park Hospital (CYC's urban background continuous monitoring site) also improved by 6% between 2022 and 2023.

Concentrations of NO_2 monitored at the majority of locations in York throughout 2023 continue the general downward trend in NO_2 concentrations monitored in the city since 2012. Ongoing air quality monitoring in all locations will be fundamental to understanding the longer-term environmental impacts of the pandemic and the magnitude of any changes due to increased sustained levels of walking and cycling, changes in public transport use and ongoing air quality improvement initiatives.

With respect to the city centre AQMA, 5 CYC monitoring locations measured annual mean NO_2 concentrations of 40µg/m^3 or above in 2023. Exceedances of the health based annual mean NO_2 objective of 40µg/m^3 were monitored at one location on Gillygate (Diffusion Tubes 7), at the junction of Gillygate and Bootham (Diffusion Tubes A1) and on Rougier Street (Diffusion Tube 115[8]). Two further locations on Gillygate (Diffusion Tubes 13 and 14) measured annual mean NO_2 concentrations equal to the objective of 40µg/m^3.

Maximum annual mean concentrations of NO_2 monitored at relevant locations across the current AQMA were 43µg/m^3 (Gillygate / Bootham), 37µg/m^3 (George Hudson St / Rougier St), 37µg/m^3 (Holgate / Blossom Street), 31µg/m^3 (Lawrence St), 29µg/m^3 (Fishergate / Paragon St), 26µg/m^3 (Prices Lane/Nunnery Lane) and 35µg/m^3 (Coppergate). Maximum concentrations of NO_2 decreased in all these areas between 2022 and 2023 and ranged from 2% lower on Coppergate (in 2023) to 16% lower around Prices Lane / Nunnery Lane and Rougier Street (in 2023).

In line with DEFRA's LAQM guidance, before revoking an AQMA on the basis of measured pollutant concentrations, a local authority needs to be reasonably certain that any future exceedences of air quality objectives are unlikely. For this reason, it is expected

[8] Tube 115 located at a bus stop and therefore not a relevant location with respect to annual mean NO_2 objective

that local authorities will need to consider measurements carried out over several years or more, national trends in emissions, as well as local factors that may affect the AQMA. Additionally, where NO_2 monitoring is undertaken using diffusion tubes, to allow for the uncertainty associated with the monitoring method, it is recommended that revocation of an AQMA should only be considered following three consecutive years of annual mean NO_2 concentrations being lower than 36µg/m3 (i.e. within 10% of the annual mean NO_2 objective). CYC will keep the AQMA boundary under review taking into account these guidelines.

Concentrations of NO_2 monitored in the former Fulford Road AQMA in 2023 continue to be well below the annual mean objective of 40µg/m^3. The highest recorded levels of NO_2 in this area were monitored on Fulford Main Street (Diffusion Tube C58) and were 25µg/m^3. This supports the decision to revoke the Fulford Road AQMA, as discussed in CYC's previous Annual Status Reports and implemented in February 2020.

Concentrations of NO_2 monitored in the former Salisbury Terrace / Leeman Road AQMA in 2023 were also all well below the annual mean objective of 40µg/m^3. The highest recorded levels of NO_2 in this area were monitored on Salisbury Terrace (Diffusion Tube 104) and were 27µg/m^3. This confirms that the decision to revoke this AQMA in December 2017 was appropriate.

In December 2018, the boundary of the city centre AQMA was extended to include the full length of Coppergate and the buildings either side of the road, due to monitored concentrations of NO_2 above the annual mean objective for this pollutant. The highest annual mean concentrations of NO_2 monitored along Coppergate in 2023 was 35µg/m^3 at site D56 (Three Tuns Pub, 12 Coppergate) which is below the annual mean objective for this pollutant. Whilst annual mean concentrations of NO_2 were below the objective in this location in 2022 and 2023 (35-36 µg/m^3), they are well above concentrations monitored in 2020 and 2021 (31-32 µg/m^3). It is therefore considered appropriate to keep this area of the city under observation to establish longer term trends, prior to making any amendments to the AQMA boundary.

Revisions to the AQMA Order in 2018 also removed the reference to breaches of the short-term hourly objective along George Hudson Street / Rougier Street / Bridge Street based on monitoring results in this area. The latest 2023 monitoring results for this area of the city indicate that this short-term objective is still being met (all annual mean concentrations were less than 60µg/m^3 which suggests that an exceedance of the 1-hour mean objective is unlikely).

3.2.2 Particulate Matter (PM_{10})

Table A.6 in Appendix A: Monitoring Results compares the ratified and adjusted monitored PM_{10} annual mean concentrations for the past five years with the air quality objective of 40µg/m^3.

Table A.7 in Appendix A compares the ratified continuous monitored PM_{10} daily mean concentrations for the past five years with the air quality objective of 50µg/m^3, not to be exceeded more than 35 times per year.

CYC monitored particulate (PM_{10}) at 4 sites in the city in 2023 (Bootham, Fishergate, Holgate Road and Plantation Drive). National air quality objectives for PM_{10} are currently met in York; this has been the case since monitoring of PM_{10} was established in the city. The highest annual mean concentration of PM_{10} monitored in York during 2023 was 16.8µg/m^3 at the Holgate Road continuous monitor. Along with many areas of the UK, this concentration is above the World Health Organisation (WHO) guideline for this pollutant, which has recently been strengthened to 15µg/m^3. Annual mean concentrations of PM_{10} monitored in 2023 were below levels monitored in 2022 at all 4 CYC sites.

At roadside locations between 2022 and 2023, annual mean PM_{10} decreased at Plantation Drive, Holgate Road and Fishergate by 5%, 6% and 19% respectively. Annual mean concentrations of PM_{10} monitored at the Bootham background site also decreased by 23% between 2022 and 2023. Based on PM_{10} monitoring data over the last 5 years, there does not appear to be any clear trend in PM_{10} concentrations.

3.2.3 Particulate Matter ($PM_{2.5}$)

Table A.8 in Appendix A presents the ratified and adjusted monitored $PM_{2.5}$ annual mean concentrations for the past five years.

Although not explicitly required under the Local Air Quality Management regime, where Local Authorities undertake $PM_{2.5}$ monitoring they are encouraged to report it as part of the Annual Status Report. Micro-particulate, or $PM_{2.5}$, is the pollutant which has the biggest impact on public health and on which the Public Health Outcomes framework (PHOF) indicator is based.

CYC monitored $PM_{2.5}$ at four locations in the city in 2023, namely Bootham (urban background site), Fishergate, Gillygate and Holgate (roadside sites). Monitoring of $PM_{2.5}$ at Fishergate and Bootham is carried out as part of DEFRA's Automatic and Rural

Monitoring Network (AURN). Monitoring at Gillygate and Holgate was established by CYC as a result of the growing concerns over the health impacts of $PM_{2.5}$.

National air quality objectives for $PM_{2.5}$ are currently met in York. The highest annual mean level of $PM_{2.5}$ monitored in York during 2023 was 8.0µg/m^3 at the Fishergate monitor. This compares with a maximum level of 8.8µg/m^3 monitored in 2022, also at Fishergate. All monitored concentrations in 2023 are well within the current annual mean objective of 10µg/m^3. As with most areas of the UK, monitored concentrations of $PM_{2.5}$ in York are above the WHO Guideline value of 5µg/m^3 for this pollutant.

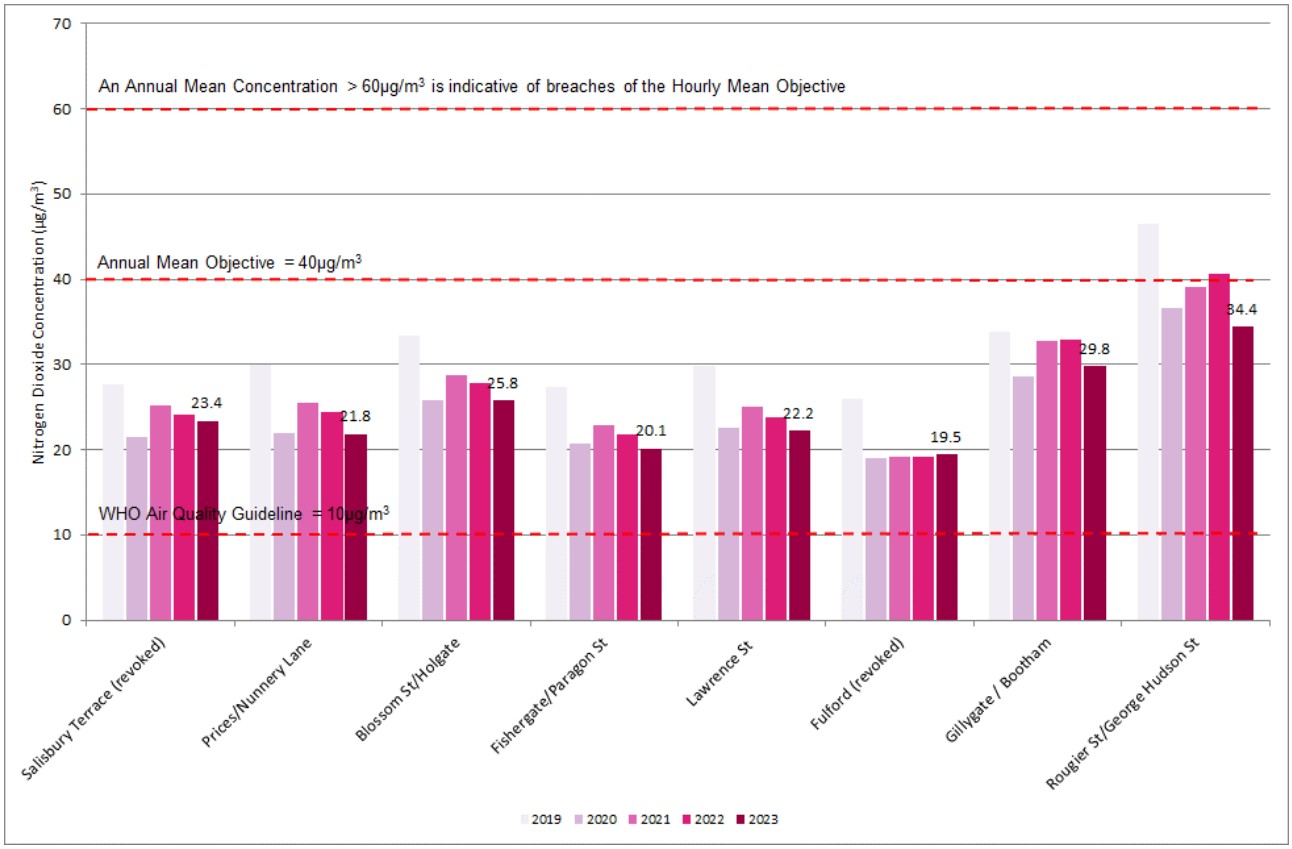
Between 2022 and 2023, annual mean concentrations of $PM_{2.5}$ decreased at Bootham and Fishergate (10% and 8% respectively) and remained the same at Gillygate at 7.2µg/m^3. Trends over the last 5 years reveal that concentrations of $PM_{2.5}$ have generally decreased across the city.

3.3 Air Quality Indicators

3.3.1 Council Plan Air Quality Indicators

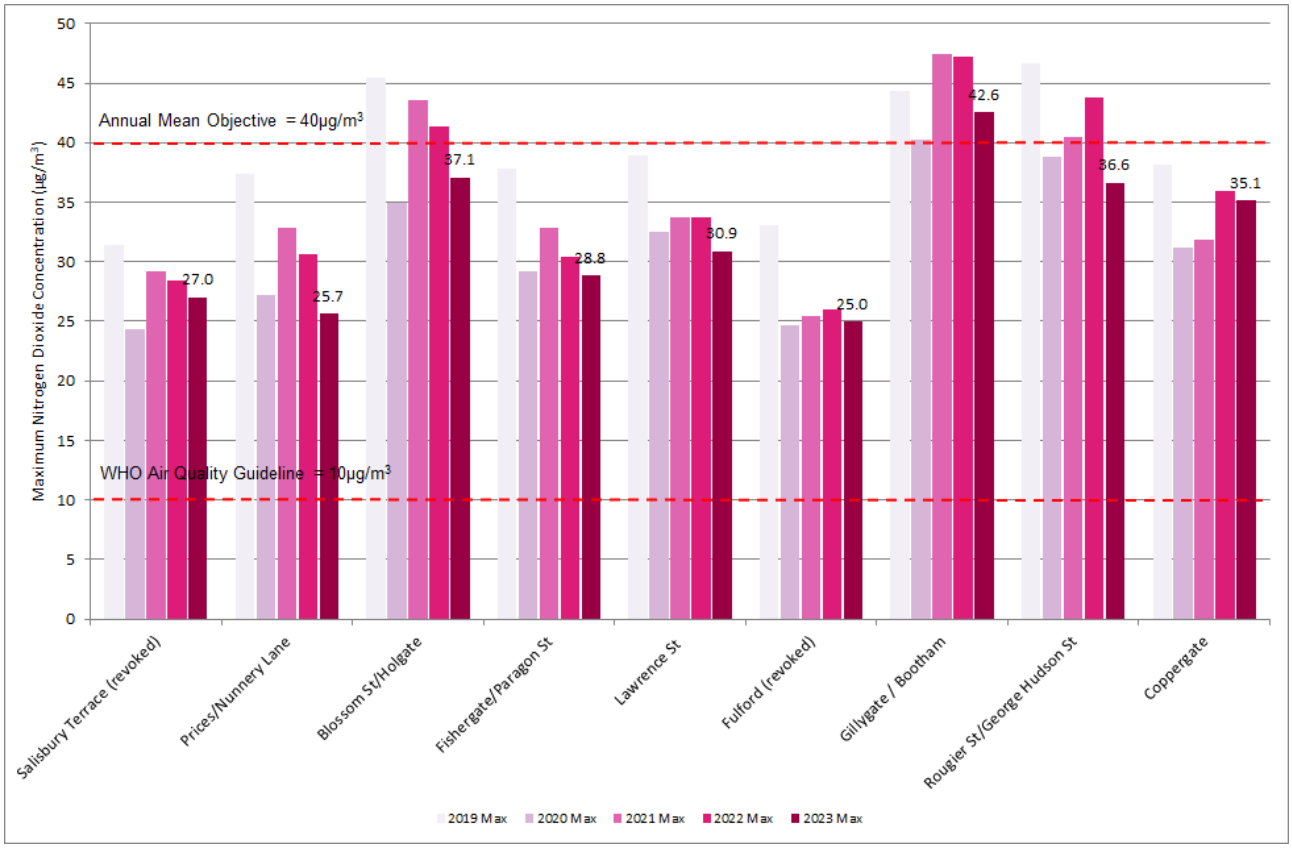
Three air quality indicators have been developed to look at trends in air quality across AQMAs/technical breach areas and are as follows:

Indicator CAN027 – Average Annual Mean Nitrogen Dioxide Concentration in each area of technical breach. This indicator provides an average nitrogen dioxide concentration within areas of the AQMA where properties are included in the boundary and breaches of the annual mean objective have previously been monitored (historical areas of technical breach, such as Salisbury Terrace, are also shown for information). Monitoring results include bias corrected diffusion tube data and data from continuous monitors (if applicable). Trends for CAN027 between 2019 and 2023 are shown below:



Average concentrations of NO_2 monitored in 2023 were equal to (within 0.3µg/m^3) or lower than 2022 in all areas. Indicator CAN027 continues to suggest a steady downward trend in NO_2 concentrations over the last 10+ years. It should be noted that NO_2 concentrations in 2020 were atypical / depressed due to the Covid-19 pandemic, as shown on the graph above.

Indicator CAN028 - Maximum Nitrogen Dioxide Concentration (at relevant location) in each area of Technical Breach. This indicator provides a maximum recorded annual mean nitrogen dioxide concentration within areas of the AQMA where properties are included in the boundary and breaches of the annual mean objective have previously been monitored (historical areas of technical breach, such as Salisbury Terrace and Fulford Road, are also shown for information). This only considers monitoring at relevant locations and is therefore useful to look at the validity of existing AQMA boundaries year to year. Trends between 2019 and 2023 are shown below:

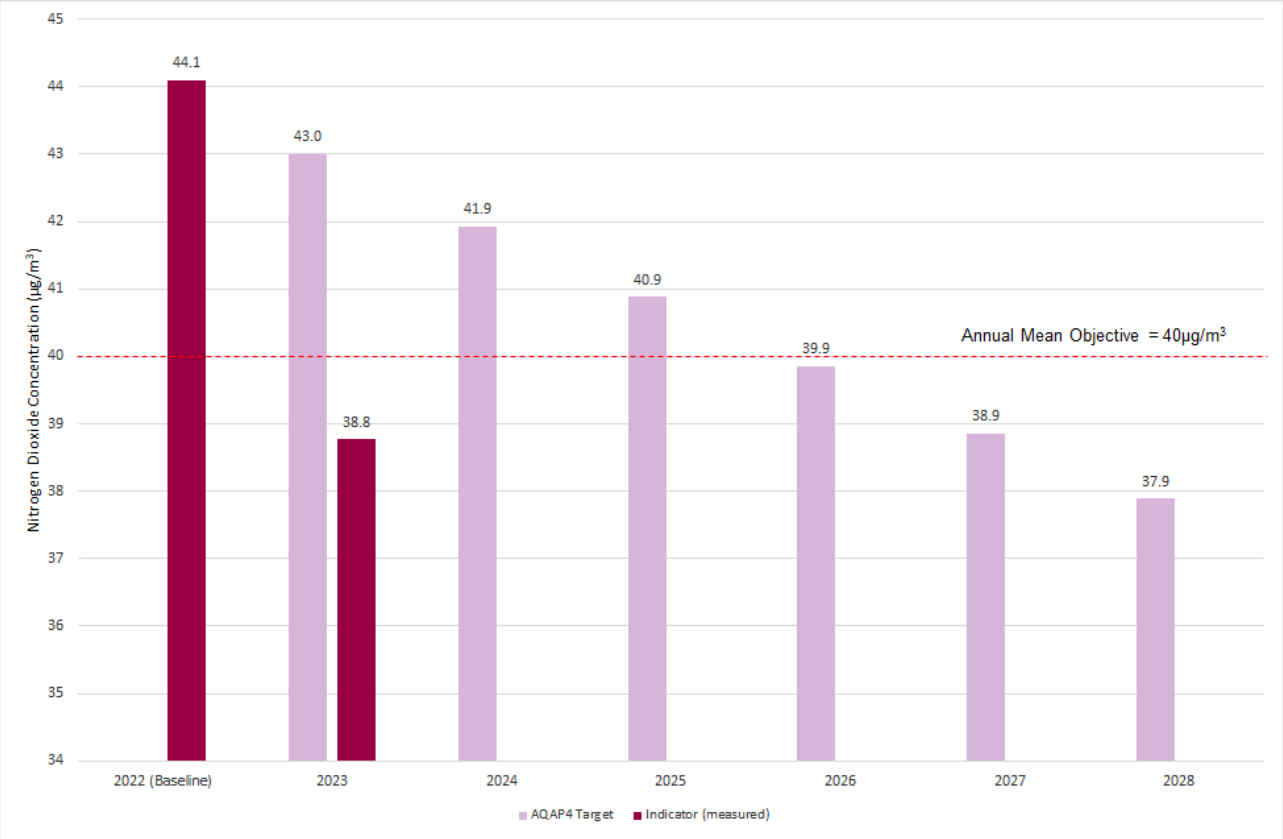


The maximum annual mean NO_2 concentration monitored at a relevant location in 2023 was 42.6µg/m^3 (Diffusion tube A1 near the junction of Gillygate and Bootham). Maximum concentrations of NO_2 in all other areas in 2023 were below the annual mean NO_2 objective and decreased between 2022 and 2023. Of the 3 areas that exhibited breaches of the annual mean NO_2 objective in 2022, namely Blossom St/Holgate, Gillygate/Lord Mayor's Walk and Rougier Street/George Hudson St, all areas exhibited improvements in 2023 (10%, 10% and 16% respectively).

Whilst there is a long-term downward trend in NO_2 concentrations over the last 10+ years for most areas of the AQMA, maximum concentrations of NO_2 in and around Gillygate have been more variable over the last 5/6 years. It should, however, be noted that the

current 2023 maximum value of 42.6µg/m^3 in Gillygate is lower than that monitored in 2021 and 2022 and indeed the lowest concentration recorded over the last 13 years (with the exception of 2020 during the pandemic).

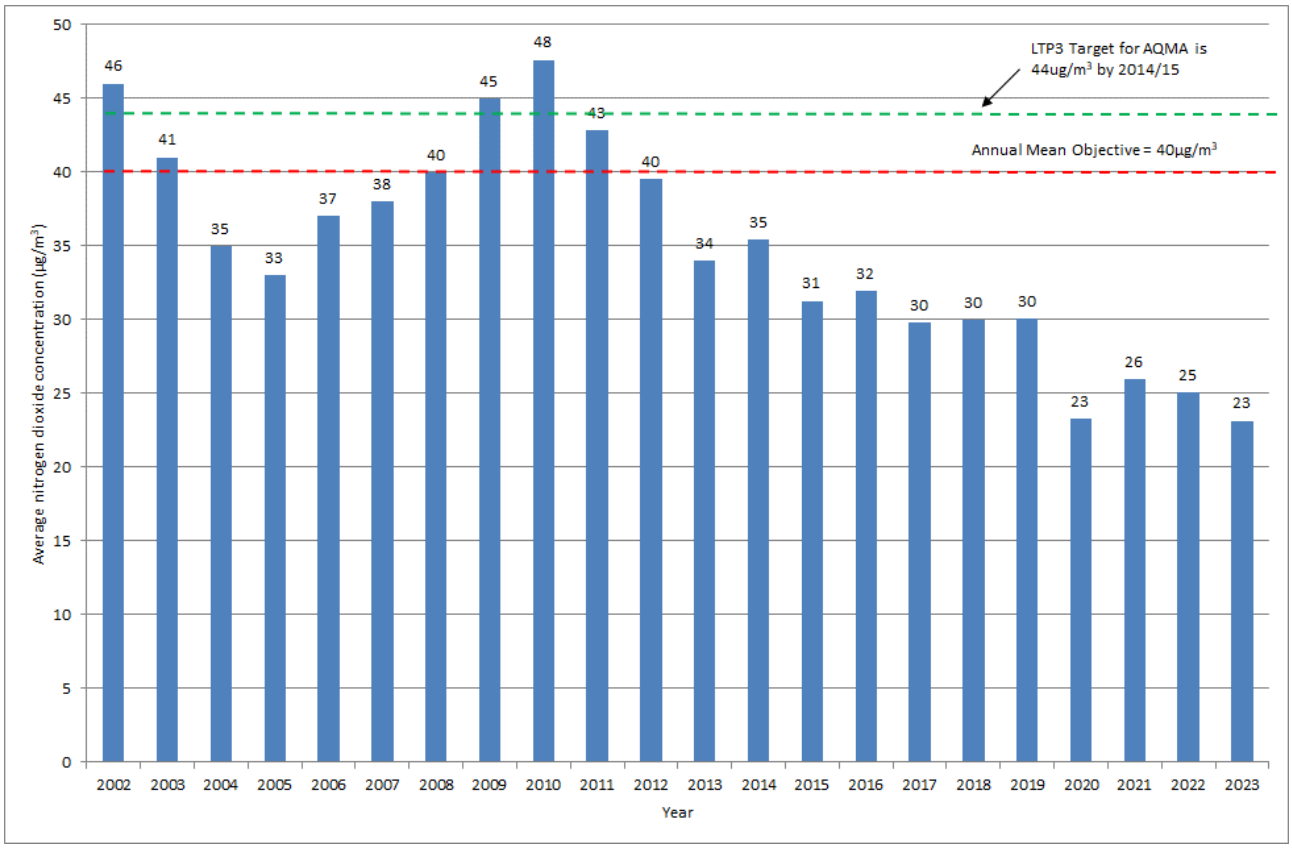
Indicator CAN038: Average of maximum annual mean nitrogen dioxide concentrations recorded across three areas of technical breach (at points of relevant public exposure). With the exception of the current monitoring year of 2023 (and 2020 during the pandemic), CYC's air quality monitoring network has previously demonstrated sustained exceedances of the NO_2 objective of 40µg/m^3 in 3 areas of the city, namely Gillygate/Lord Mayor's Walk, Blossom Street/Holgate Road, and Rougier Street / George Hudson Street. These are referred to as 'technical breach areas' and fall within CYC's AQMA. Whilst not all monitoring points within these areas are exceeding health-based standards, there has previously been at least one monitor at a point of relevant public exposure within each area that is above the annual mean objective of 40µg/m^3. Indicator CAN038 considers an average of the maximum annual mean concentrations of NO_2 in these three areas (specific values for the 3 respective areas are shown in indicator CAN028 above).



Whilst the (draft) AQAP4 target value of 43µg/m^3 was met in 2023 (and the indictor is lower than 40µg/m^3) it should be noted that the Gillygate area remains in breach of the 40µg/m^3 annual mean NO_2 objective as shown by indicator CAN028 above).

3.3.2 Local Transport Plan Air Quality Indicator

For the purpose of monitoring the impact of York's Local Transport Plan a local air quality indicator was established and has been reported over the last 20+ years. This indicator measures the mean of annual average results obtained from 36 diffusion tubes located within CYC's city centre AQMA. Trends in this indicator between 2002 and 2023 are shown below:



This indicator suggests that NO_2 concentrations across the city were in general decline between 2002 and 2005. This was followed by a steady increase in concentrations between 2006 and 2010. There has been an ongoing downward trend in NO_2 concentrations across the city centre AQMA over the last 13 years. The figure of 23µg/m^3 recorded in 2023 is the lowest recorded value since the indicator was established in 2002 and was comparable to that monitored in 2020 during the pandemic (a result of significantly lower traffic levels and associated emissions in the city as a result of the Covid-19 lockdowns). This reinforces trends seen with other council air quality indicators described above.

Appendix A: Monitoring Results

Table A.1 – Details of Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Monitoring Technique	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Inlet Height (m)
CM1	Bootham	Urban Background	460022	452777	NO_x, PM_{10}, $PM_{2.5}$	No	C, BAM	60	49.6	3.0
CM2	Fishergate	Roadside	460746	451038	NO_x, PM_{10}, $PM_{2.5}$	Yes - AQMA No.5	C, BAM	10	3.2	2.7
CM3	Holgate	Roadside	459512	451282	NO_x, PM_{10}, $PM_{2.5}$	Yes - AQMA No.5	C, TEOM, TEOM 1405	12	2.5	1.7
CM4	Nunnery Lane	Roadside	460068	451199	NO_x	Yes - AQMA No.5	C	4	1.7	1.7
CM5	Gillygate	Roadside	460147	452345	NO_x, $PM_{2.5}$	Yes - AQMA No.5	C, TEOM 1405	3	2.1	2.5
CM6	Lawrence Street	Roadside	461256	451340	NO_x	Yes - AQMA No.5	C	5	3.2	1.7
CM7	Heworth Green	Roadside	461126	452602	NO_x	No	C	3	1.2	1.5
CM8	Plantation Drive	Roadside	457428	452620	PM_{10}	No	TEOM	17	1.0	1.7
CM9	Fulford Road	Roadside	460937	449464	NO_x	No	C	19	5.0	1.7

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 – 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)
5	Lamp post 15 Forge Close, Jockey Lane	Roadside	462040	454883	NO_2	NO	16.9	1.9	N	~2.75
6	Lamp post top of Nunnery Lane Car Park	Roadside	459777	451406	NO_2	YES	7.7	2.8	N	~2.75
7	Gillygate opposite Portland Street	Roadside	460217	452421	NO_2	YES	2.3	0.3	N	~2.75
8	Portland Street - triplicate	Urban Background	460163	452468	NO_2	NO	3.7	1.8	N	~2.75
9	Portland Street - triplicate	Urban Background	460163	452468	NO_2	NO	3.7	1.8	N	~2.75
11	Holly Bank	Urban Background	458846	450946	NO_2	NO	7.7	0.7	N	~2.75
13	Papillion hotel, Gillygate	Roadside	460176	452377	NO_2	YES	0.1	1.5	N	~2.75
14	Gillygate Surgery	Roadside	460167	452347	NO_2	YES	0.2	2.3	N	~2.75
15	Foss Islands Rd	Roadside	461105	451458	NO_2	YES	1.9	1.9	N	~2.75
16	Prices Lane	Roadside	460160	451152	NO_2	YES	2.5	1.2	N	~2.75
17	Drainpipe of house 18 Queen St	Roadside	459646	451500	NO_2	YES	0.2	1.3	N	~2.75
18	Lamp post 4 Haxby Road	Roadside	460457	452903	NO_2	YES	3.3	1.9	N	~2.75
25	Heworth Road - Lamp post 6	Roadside	461721	452709	NO_2	NO	7.2	1.4	N	~2.75
26	Haleys Terrace (previously Longwood Road)	Roadside	460829	453524	NO_2	NO	8.5	0.4	N	~2.75
33	Haxby Road (nr Whitecross Rd)	Roadside	460598	453227	NO_2	NO	14.5	1.7	N	~2.75
35	Carr Lane	Roadside	457603	451492	NO_2	NO	6.2	2.9	N	~2.75
37	Jarvis Abbey Park	Roadside	459522	451187	NO_2	YES	21.6	2.7	N	~2.75
44	Lamp post 8 Monkgate Cloisters	Roadside	460679	452326	NO_2	YES	2	1.6	N	~2.75

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)
45	Clarence St	Roadside	460319	452754	NO_2	YES	3.6	2	N	~2.75
47	Strensall Road	Roadside	462009	456996	NO_2	NO	19.2	0.8	N	~2.75
50	BLANK	N/A	N/A	N/A	NO_2	N/A	N	N/A	N	N/A
60	First Lamp post on Navigation Road	Roadside	461017	451781	NO_2	YES	13	0.2	N	~2.75
78	Gillygate Monitoring Station - triplicate	Roadside	460149	452342	NO_2	YES	3.4	2.3	Y	~2.75
79	Gillygate Monitoring Station - triplicate	Roadside	460149	452342	NO_2	YES	3.4	2.3	Y	~2.75
80	Gillygate Monitoring Station - triplicate	Roadside	460149	452342	NO_2	YES	3.4	2.3	Y	~2.75
83	Drainpipe 6 Stockton Lane - nr Heworth Rd roundabout	Urban Background	461597	452830	NO_2	NO	0.1	8.8	N	~2.75
88	Lamp post 1 Yew Tree Mews Osbaldwick Village	Urban Background	463354	451972	NO_2	NO	4.9	0.6	N	~2.75
90	Lamp post Opposite Montaque Street on Cambleshon Road	Roadside	459997	450109	NO_2	NO	19.8	1	N	~2.75
96	Heslington Lane	Roadside	460978	449452	NO_2	NO	1.5	2.5	N	~2.75
100	House Near A59 Ringroad Roundabout	Roadside	456228	453312	NO_2	NO	0.2	15	N	~2.75
101	Wiggington Road near the ring road roundabout	Roadside	459746	455897	NO_2	NO	15	0.5	N	~2.75
102	Signpost between houses 252 & 254 on Salisbury Terrace - triplicate	Roadside	458703	452429	NO_2	NO	0.2	1	N	~2.75
103	Signpost between houses 252 & 254	Roadside	458703	452429	NO_2	NO	0.1	1.4	N	~2.75

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)
	on Salisbury Terrace - triplicate									
104	Signpost between houses 252 & 254 on Salisbury Terrace - triplicate	Roadside	458703	452429	NO_2	NO	0.1	1.4	N	~2.75
107	Inbetween corner shop & betting office	Roadside	458779	452387	NO_2	NO	3	3.8	N	~2.75
108	On signpost opposite side of road from 200 Salisbury Terrace	Roadside	458814	452373	NO_2	NO	0.2	1.5	N	~2.75
109	Signpost outside 16 Rougier Street	Roadside	459924	451833	NO_2	YES	0.2	2.5	N	~2.75
110	Signpost inbetween Club Salvation & 31 George Hudson Street	Roadside	459985	451727	NO_2	YES	0.2	2.3	N	~2.75
111	Lamp post at side of Cedar Court opposite entrance to Multi-storey Car Park on Tanner Row	Roadside	459917	451728	NO_2	NO	26	2.6	N	~2.75
112	Lamp post outside St Gregorys Mews, opposite Council HQ Toft Green	Roadside	459873	451684	NO_2	NO	1	2.3	N	~2.75
114	Bus Stop outside Society bar/cafe Rougier Street	Roadside	459981	451778	NO_2	YES	3.5	2.7	N	~2.75
116	111 Poppleton Road, drainpipe	Roadside	458212	452037	NO_2	NO	0.1	5.3	N	~2.75

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)
125	Osbaldwick Derwenthorpe	Roadside	463194	451967	NO_2	NO	20	1.6	N	~2.75
126	New Tube (Osbalwick Parish Council) nr Bridge	Roadside	463482	451896	NO_2	NO	17.5	0.9	N	~2.75
127	Lamp post to left of 102 Layerthorpe (flats)	Roadside	461108	452313	NO_2	NO	3.3	1.8	N	~2.75
128	Drainpipe between 7-9 Livingstone Street	Roadside	458686	452369	NO_2	NO	0.1	1.6	N	~2.75
129	Drainpipe to front of 88 Station Road	Roadside	455968	453397	NO_2	NO	0.1	14.5	N	~2.75
2a	Fishergate Monitoring station - triplicate	Roadside	460746	451034	NO_2	YES	16.3	3.5	Y	~2.75
2b	Fishergate Monitoring station - triplicate	Roadside	460746	451034	NO_2	YES	16.3	3.5	Y	~2.75
2c	Fishergate Monitoring station - triplicate	Roadside	460746	451034	NO_2	YES	16.3	3.5	Y	~2.75
3a	Bootham Monitoring Station - triplicate	Urban Background	460024	452767	NO_2	NO	39	49.6	Y	~2.75
3b	Bootham Monitoring Station - triplicate	Urban Background	460024	452767	NO_2	NO	39	49.6	Y	~2.75
3c	Bootham Monitoring Station - triplicate	Urban Background	460024	452767	NO_2	NO	39	49.6	Y	~2.75
95a	Fulford Monitoring Station - triplicate	Roadside	460938	449465	NO_2	NO	19	6.5	Y	~2.75
95b	Fulford Monitoring Station - triplicate	Roadside	460938	449465	NO_2	NO	19	6.5	Y	~2.75
95c	Fulford Monitoring Station - triplicate	Roadside	460938	449465	NO_2	NO	19	6.5	Y	~2.75

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)
9a	Portland Street - triplicate	Urban Background	460163	452468	NO_2	NO	3.7	1.8	N	~2.75
A1	Bootham traffic light outside dance shop	Roadside	460088	452263	NO_2	YES	0.2	2.3	N	~2.75
A11	Traffic lights end of Water Lane	Roadside	459341	453042	NO_2	YES	13.6	0.4	N	~2.75
A12	Lamp post 7 Clifton Green	Roadside	459251	453008	NO_2	YES	12.9	2.2	N	~2.75
A13	Lamp post 1 Clifton Dale - triplicate	Urban Background	459335	452931	NO_2	NO	2.7	1.6	N	~2.75
A14	Lamp post 1 Clifton Dale - triplicate	Urban Background	459335	452931	NO_2	NO	2.7	1.6	N	~2.75
A14a	Lamp post 1 Clifton Dale - triplicate	Urban Background	459335	452931	NO_2	NO	2.7	1.6	N	~2.75
A17	Sailsbury Road	Roadside	458578	452472	NO_2	NO	8.7	1.5	N	~2.75
A19	17 Sailsbury Terrace - triplicate	Roadside	458713	452414	NO_2	NO	0.2	1.3	N	~2.75
A19a	17 Sailsbury Terrace - triplicate	Roadside	458713	452414	NO_2	NO	0.2	1.3	N	~2.75
A19b	17 Sailsbury Terrace - triplicate	Roadside	458713	452414	NO_2	NO	0.2	1.3	N	~2.75
A2	Drainpipe on front of registry office	Roadside	459917	452405	NO_2	YES	0.2	3.4	N	~2.75
A20	224 Sailsbury Terrace - triplicate	Roadside	458760	452404	NO_2	NO	0.2	1.1	N	~2.75
A20a	224 Sailsbury Terrace - triplicate	Roadside	458760	452404	NO_2	NO	0.2	1.1	N	~2.75
A20b	224 Sailsbury Terrace - triplicate	Roadside	458760	452404	NO_2	NO	0.2	1.1	N	~2.75
A21	Kingsland Terrace	Urban Background	458806	452326	NO_2	NO	0.2	1.4	N	~2.75
A22	Kingsland Terrace	Urban Background	458792	452242	NO_2	NO	0.2	23.8	N	~2.75
A25	Garfield Terrace	Roadside	458706	452225	NO_2	NO	0.2	1.5	N	~2.75

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)
A29	Low Poppleton Lane	Urban Background	456939	453013	NO_2	NO	23.6	1.1	N	~2.75
A3	WRVS building - Bootham	Roadside	459822	452492	NO_2	YES	0.2	2.6	N	~2.75
A30	Boroughbridge Road	Urban Background	457060	452888	NO_2	NO	8.3	6.2	N	~2.75
A36	Boroughbridge Road	Urban Background	457625	452446	NO_2	NO	0.2	9.4	N	~2.75
A38	Boroughbridge Road	Urban Background	457857	452334	NO_2	NO	0.2	10.3	N	~2.75
A4	St Olaves Road	Urban Background	459699	452638	NO_2	YES	5.8	0.7	N	~2.75
A40	Poppleton Road School	Urban Background	458109	452196	NO_2	NO	0.2	7.9	N	~2.75
A41	140 Poppleton Road	Roadside	458172	452108	NO_2	NO	0.2	5.3	N	~2.75
A45	Grantham Drive	Urban Background	458384	451817	NO_2	NO	0.2	10.5	N	~2.75
A98	8 Poppleton Road	Roadside	458666	451468	NO_2	NO	0.2	4.9	N	~2.75
A50	Outside Fox pub - Holgate Rd	Roadside	458732	451393	NO_2	YES	16.1	0.3	N	~2.75
A51	Thrall entrance	Urban Background	458827	451348	NO_2	YES	18	2.2	N	~2.75
A52	Holgate Road (corner of Hamilton Dr East)	Roadside	458945	451254	NO_2	YES	10.9	2	N	~2.75
A53	Holgate Road	Roadside	459066	451239	NO_2	YES	7.9	2.7	N	~2.75
A54	Dalton Terrace	Roadside	459254	451223	NO_2	YES	17.1	3.3	N	~2.75
A55	Holgate Road	Roadside	459351	451221	NO_2	YES	5.5	0.2	N	~2.75
A56	Holgate Road	Urban Background	459470	451268	NO_2	YES	0.2	10.2	N	~2.75
A57	Hairdressers Holgate Road	Roadside	459533	451280	NO_2	YES	0.2	2.8	N	~2.75
A6	Clifton Bingo Hall	Roadside	459536	452811	NO_2	YES	6.2	3	N	~2.75

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)
A60	Shipton Road	Urban Background	458906	453276	NO_2	NO	0.2	21.5	N	~2.75
A62	42 Shipton Road	Urban Background	458806	453483	NO_2	NO	0.2	15.7	N	~2.75
A64	Lamp post outside Charlie Browns	Roadside	460030	452327	NO_2	YES	2.4	0.6	N	~2.75
A66	70 Shipton Road	Urban Background	458672	453685	NO_2	NO	0.2	18.4	N	~2.75
A69	6 South Cottages	Urban Background	458375	453958	NO_2	NO	0.2	10	N	~2.75
A7	51 Clifton	Roadside	459441	452892	NO_2	YES	3.3	2.1	N	~2.75
A70	120 Shipton Road	Urban Background	458299	454070	NO_2	NO	0.2	13	N	~2.75
A71	154 Shipton road	Urban Background	458121	454254	NO_2	NO	0.2	9.6	N	~2.75
A74	176 Shipton Road	Urban Background	458041	454371	NO_2	NO	0.2	7.1	N	~2.75
A77	Lamp post outside 206 Shipton Road	Urban Background	457929	454537	NO_2	NO	6.1	1.7	N	~2.75
A81	Lamp post outside 276 Shipton Rd	Urban Background	457733	454805	NO_2	NO	0.2	8.4	N	~2.75
A85	Drainpipe front of Greenside guest house	Urban Background	459364	453009	NO_2	NO	0.2	11.5	N	~2.75
A88	111 Boroughbridge Road, Drainpipe nearest Garage at side of the door	Urban Background	457470	452550	NO_2	NO	0.2	12.9	N	~2.75
A9	Lime Tree House	Roadside	459295	453067	NO_2	YES	12.6	1.7	N	~2.75
A90	Lamp post 25 Shipton Rd	Roadside	459238	453157	NO_2	YES	8.2	1.9	N	~2.75
A94	5 Salisbury Road	Roadside	458651	452426	NO_2	NO	0.2	13.7	N	~2.75
A96	Ouseclife Gardens signpost, outside 31 Water End	Roadside	459038	452850	NO_2	NO	10	0.6	N	~2.75

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)
A97	Lamp post next to Air Quality Monitoring Station on Plantation Drive	Roadside	457431	452616	NO_2	NO	18.7	2.2	N	~2.75
B1	Lamp post 1 Lowther Street opposite Riverside House Flats	Roadside	460848	452582	NO_2	YES	0.2	1.3	N	~2.75
B15	Lamp post 99 Huntington Road	Roadside	461294	455305	NO_2	NO	28	1.6	N	~2.75
B19	Lamp post 5 outside Huntington Primary School	Roadside	461891	455876	NO_2	NO	17.2	1.6	N	~2.75
B2	Lamp post 7 Huntington Road opposite Park Grove	Roadside	460924	452697	NO_2	YES	2.5	1.3	N	~2.75
B29	Eastern Terrace	Roadside	461453	452750	NO_2	NO	0.3	1	N	~2.75
B3	Lamp post 11 Huntington Road outside no 70	Roadside	460952	452826	NO_2	NO	2.9	1.4	N	~2.75
B36	Lamp post 60 Malton Road - triplicate	Urban Background	462565	454194	NO_2	NO	16.9	0.6	N	~2.75
B37	Lamp post 60 Malton Road - triplicate	Urban Background	462565	454194	NO_2	NO	16.9	0.6	N	~2.75
B37a	Lamp post 60 Malton Road - triplicate	Urban Background	462565	454194	NO_2	NO	16.9	0.6	N	~2.75
B38	482 Malton Road	Urban Background	463757	455155	NO_2	NO	0.2	11.7	N	~2.75
B41	76 Lawrence Street	Urban Background	461326	451330	NO_2	YES	0.2	6.5	N	~2.75

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)
B42	83 Lawrence Street	Urban Background	461430	451348	NO_2	YES	0.2	7.2	N	~2.75
B43	117 Lawrence Street	Urban Background	461557	451343	NO_2	YES	0.2	7.9	N	~2.75
B44	Outside nursing home, Lawrence Street	Roadside	461643	451343	NO_2	YES	8.6	1.9	N	~2.75
B45	Pedestrian crossing Traffic Light Melrosegate Crossroads	Roadside	461849	451284	NO_2	YES	17.3	0.5	N	~2.75
B47	47 Hull Road	Urban Background	462019	451289	NO_2	NO	0.2	12.2	N	~2.75
B48	61 Hull Road	Urban Background	462122	451289	NO_2	NO	0.2	12.8	N	~2.75
B50	134 Hull Road	Roadside	462291	451269	NO_2	NO	0.2	3.7	N	~2.75
B51	117 Hull Road	Urban Background	462384	451298	NO_2	NO	0.2	13.2	N	~2.75
B56	Lamp post 40 Hull Road	Roadside	462888	451289	NO_2	NO	14.4	2.3	N	~2.75
B58	231 Hull Road	Urban Background	462970	451300	NO_2	NO	0.2	14	N	~2.75
B60	Lamp post 1 Nursery Gardens	Urban Background	463234	451339	NO_2	NO	10.7	1.3	N	~2.75
B63	Lamp post 54 Tang Hall Lane	Roadside	462704	451300	NO_2	NO	13.2	0.9	N	~2.75
B72	Front of York Cycleworks	Roadside	461122	451374	NO_2	YES	10	2.9	N	~2.75
B74	Heworth Court Hotel sign outside Sutherland House on side of house on drainpipe.	Urban Background	461371	452708	NO_2	NO	5.2	17.8	N	~2.75

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)
B80	On drainpipe on front of Heworth Surgery.	Urban Background	461185	452663	NO_2	NO	24.5	13.4	N	~2.75
B82	Lamp post Dalguise Grove	Urban Background	460974	452563	NO_2	NO	3.1	1.1	N	~2.75
B83	Lamp post 24 Outside No.55 Heworth Green	Roadside	461285	452695	NO_2	NO	11.3	1	N	~2.75
B84	Drainpipe to the left of the front door on 167 Hull Road	Urban Background	462654	451293	NO_2	NO	0.2	13.4	N	~2.75
B85	Lamp post 7 Outside St Lawrences Working Mens Club	Roadside	461227	451368	NO_2	YES	18.8	5.6	N	~2.75
B86	Lamp post 16 Heworth Green, next to Air Quality Station	Roadside	461116	452602	NO_2	NO	5	0.7	N	~2.75
B88	Telegraph Pole 381 Hull Road	Roadside	462799	451291	NO_2	NO	10	6.8	N	~2.75
B90	11 Lawrence Street	Roadside	461133	451394	NO_2	YES	0.1	4.4	N	~2.75
B91	Lamp post 4 outside flats, opposite Rose and Crown Pub	Roadside	461143	451364	NO_2	YES	0.9	3.1	N	~2.75
C12	Lamp post 1 Ainsty Grove	Urban Background	458825	449928	NO_2	NO	10.8	0.3	N	~2.75
C17	248 Tadcaster Rd	Urban Background	459085	450544	NO_2	NO	0.2	20.6	N	~2.75
C18	196 Mount Vale	Urban Background	459204	450772	NO_2	YES	0.2	9.2	N	~2.75
C19	Trentholme Dr	Urban Background	459271	450819	NO_2	YES	7.7	0.4	N	~2.75

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)
C2	Lamp post 66 Tesco roundabout	Roadside	458333	448974	NO_2	NO	16.9	1.1	N	~2.75
C20	Elmbank hotel	Urban Background	459280	450923	NO_2	YES	21.4	0.5	N	~2.75
C21	Dalton Terrace	Roadside	459410	451040	NO_2	YES	3.8	3.5	N	~2.75
C22	Park Street	Urban Background	459570	451195	NO_2	YES	14.4	1.1	N	~2.75
C23	The Mount	Roadside	459553	451252	NO_2	YES	0.2	3	N	~2.75
C26	Outside Odean	Roadside	459639	451334	NO_2	YES	12.9	0.8	N	~2.75
C27	Windmill Pub	Roadside	459717	451433	NO_2	YES	0.2	3.2	N	~2.75
C28	House top of Selby Rd	Urban Background	461201	448386	NO_2	NO	0.2	15.3	N	~2.75
C29	Lamp post 34 Selby Road	Roadside	461196	448426	NO_2	NO	21.7	0.5	N	~2.75
C30	Lamp post 2 Selby Rd	Roadside	461185	448462	NO_2	NO	13.1	1.2	N	~2.75
C31	2 Selby Rd	Urban Background	461193	448473	NO_2	NO	0.2	14.1	N	~2.75
C32	Fordlands Rd	Urban Background	461128	448823	NO_2	NO	5.4	6.8	N	~2.75
C33	124 Main St	Urban Background	461085	448933	NO_2	NO	1	11.2	N	~2.75
C34	103 Main St	Roadside	461085	449067	NO_2	NO	0.2	3.5	N	~2.75
C36	50 Main St	Roadside	461052	449146	NO_2	NO	0.2	3.7	N	~2.75
C37	59 Main St	Urban Background	461045	449223	NO_2	NO	0.2	6.7	N	~2.75
C38	Lamp post 8 Main St	Roadside	461038	449225	NO_2	NO	6	0.4	N	~2.75
C39	18 Main St	Roadside	460974	449336	NO_2	NO	0.2	2.4	N	~2.75
C4	147 Tadcaster Rd	Urban Background	458470	449126	NO_2	NO	0.2	14.3	N	~2.75
C40	Adams House B&B	Urban Background	460910	449628	NO_2	NO	0.2	8.7	N	~2.75

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)
C42	300 Fulford Rd	Urban Background	460857	449748	NO_2	NO	0.2	10	N	~2.75
C43	Lamp post 39 Fulford Rd - triplicate	Roadside	460869	449730	NO_2	NO	8.7	0.3	N	~2.75
C43a	Lamp post 39 Fulford Rd - triplicate	Roadside	460869	449730	NO_2	NO	8.7	0.3	N	~2.75
C44	Lamp post 39 Fulford Rd - triplicate	Roadside	460869	449730	NO_2	NO	8.7	0.3	N	~2.75
C49	Alma terrace	Urban Background	460860	450530	NO_2	YES	6	0.9	N	~2.75
C51	Conservative Club	Roadside	460871	450727	NO_2	YES	9.8	1	N	~2.75
C52	Howard St	Roadside	460853	450781	NO_2	YES	9.9	1.4	N	~2.75
C53	Winterscale St	Roadside	460766	450924	NO_2	YES	14.7	2.1	N	~2.75
C54	Escrick St	Roadside	460762	451069	NO_2	YES	1.7	3.2	N	~2.75
C56	Pedestrian crossing on junction of Scarcroft Road/The Mount	Roadside	459484	451141	NO_2	YES	25.1	1.3	N	~2.75
C57	Lamp post 1 Nelson's Lane	Urban Background	458912	450111	NO_2	NO	5.9	1.3	N	~2.75
C58	Drainpipe of 4 Main Street Fulford	Roadside	460926	449429	NO_2	NO	0.2	3.6	N	~2.75
C59	Drainpipe of 34 Tadcaster Road	Roadside	458735	449713	NO_2	NO	0.2	3.6	N	~2.75
C62	East Mount Road	Roadside	459579	451251	NO_2	YES	0.1	1	N	~2.75
C63	1 St Edwards Close	Roadside	458790	449740	NO_2	NO	0.1	15.6	N	~2.75
C7	Slingsby Grove	Roadside	458611	449477	NO_2	NO	1.4	2.6	N	~2.75
D10	Daisy Taylors Card Shop, Kings Square	Urban Background	460443	451927	NO_2	NO	0.2	0.9	N	~2.75
D12	On signpost outside 26 Fossgate	Roadside	460567	451740	NO_2	YES	0.2	1.6	N	~2.75

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)
D13	Lamp post 4 Skeldergate, opposite City Mills	Roadside	460271	451358	NO_2	YES	1.6	1.6	N	~2.75
D14	Lamp post 3 Barbican Road outside No.7	Roadside	461077	451354	NO_2	YES	1.9	0.2	N	~2.75
D16	Lamp post 1 , Paragon St	Roadside	460708	451231	NO_2	YES	0.2	3	N	~2.75
D17	Piccadilly/ Merchantgate junction	Roadside	460575	451616	NO_2	YES	19.3	0.3	N	~2.75
D18	Lamp post 6 Clifford St opposite Peckitt Street	Roadside	460395	451502	NO_2	YES	0.4	1.8	N	~2.75
D19	Bridge St/ Micklegate Junction	Roadside	460038	451626	NO_2	YES	1.7	0.2	N	~2.75
D20	Low Ousegate / Clifford St junction, outside Waterstones	Roadside	460323	451685	NO_2	YES	13	0.5	N	~2.75
D22	Outside Museum Gardens	Roadside	460035	452010	NO_2	YES	7.9	2.1	N	~2.75
D24	Priory St sign Micklegate	Roadside	459805	451543	NO_2	NO	3.4	0.5	N	~2.75
D25	Bus Stop E outside Royal York Hotel	Roadside	459693	451750	NO_2	YES	169.3	0.4	N	~2.75
D26	Lamp post 14 Piccadilly (near Travellodge)	Roadside	460671	451400	NO_2	YES	15.5	2.1	N	~2.75
D27	Lamp post 2 St Deny's Road - outside hotel	Roadside	460734	451563	NO_2	NO	11.7	1.5	N	~2.75
D28	Lamp post 4 outside The Garden	Roadside	460764	451185	NO_2	YES	23.6	2.4	N	~2.75

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)
	of India restaurant on Fawcett Street									
D30	Lamp post outside Barbican Centre	Roadside	460834	451252	NO_2	YES	35.5	0.1	N	~2.75
D31	Lamp post 9 Barbican road outside No.24	Roadside	461002	451229	NO_2	YES	2	0.3	N	~2.75
D32	Lamp post 3 Bishopgate Street - next to bench	Roadside	460258	451208	NO_2	YES	22.2	1.9	N	~2.75
D33	Lamp post 17 Nunnery Lane outside 81	Roadside	460075	451174	NO_2	YES	3.9	0.2	N	~2.75
D35	Drainpipe of house 22, Prices Lane	Roadside	460134	451170	NO_2	YES	0.2	1.6	N	~2.75
D36	Lamp post 7 Bishopthorpe Road, opposite entrance to Charlton St	Roadside	460135	450884	NO_2	YES	6.1	0.2	N	~2.75
D37	Lamp post 3, Bishopthorpe Road, outside house 26	Roadside	460157	450988	NO_2	YES	2	2	N	~2.75
D38	Lamp post 2 Scarcroft Rd	Roadside	460088	450929	NO_2	YES	2.7	1.6	N	~2.75
D39	Lamp post 1 Bishopthorpe Road	Roadside	460185	451055	NO_2	YES	1.5	0.5	N	~2.75
D4	Lamp post 11 Lord Mayor's Walk - opposite bike shop	Roadside	460560	452300	NO_2	YES	25.1	2.3	N	~2.75
D40	Lamp post 16 Nunnery Lane	Roadside	460069	451196	NO_2	YES	3.3	1.6	N	~2.75
D41	Drainpipe of 55 Lord Mayor's Walk	Roadside	460286	452487	NO_2	YES	0.2	3.8	N	~2.75
D43	Rougier Street Signpost 1, has	Roadside	459920	451834	NO_2	YES	3	0.3	N	~2.75

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)
	"Except for Access" sign on it.									
D45	Lamp post 6 The Stonebow Opposite Windsors World of Shoes	Roadside	460673	451869	NO_2	YES	15.6	1	N	~2.75
D47	Lamp post 8 Jewbury	Roadside	460682	452187	NO_2	YES	0.6	2.4	N	~2.75
D48	Outside De Grey House right hand side of side entrance gate post	Roadside	460103	452180	NO_2	YES	33.6	2.3	N	~2.75
D49	Lamp post 1 Fishergate	Roadside	460656	451269	NO_2	YES	0.2	2.8	N	~2.75
D50	Drainpipe side of Cardshop Coppergate	Roadside	460371	451682	NO_2	YES	0.2	1.9	N	~2.75
D51	Inside Taxi Rank @ York Railway Station	Roadside	459640	451722	NO_2	NO	N	40	N	~2.75
D52	Lamp post 3 Kent Street at side of car park	Roadside	460887	451140	NO_2	NO	2	2	N	~2.75
D53	58 Nunnery Lane	Roadside	460115	451146	NO_2	YES	0.1	3.6	N	~2.75
D54	76 Nunnery Lane	Roadside	460146	451116	NO_2	YES	0.1	5.5	N	~2.75
D55	Museum Street - Opposite Thomas's Pub	Roadside	460087	452065	NO_2	YES	1.8	2.2	N	~2.75
D6	Margaret Phillipson Court, Aldwalk	Urban Background	460570	452177	NO_2	NO	0.2	2.6	N	~2.75
D8	Lamp post 2, The Stonebow - Jorvick café	Roadside	460553	451843	NO_2	NO	27.3	0.5	N	~2.75

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)
D9	Lamp post 8, Lord Mayor's Walk outside no 34	Roadside	460483	452357	NO_2	YES	1.8	0.1	N	~2.75
D56	Three Tuns Pub, 12 Coppergate	Roadside	460400	451685	NO_2	YES	0.1	1.6	N	~2.75
D57	Lamp post 4, Pedestrian Crossing, Coppergate	Roadside	460416	451708	NO_2	YES	11.9	2.4	N	~2.75
D58	Traffic lights, opposite Duttons, Coppergate	Roadside	460435	451732	NO_2	YES	8	0.1	N	~2.75
D59	Bus Stop outside 8/9 SLP	Roadside	460087	452156	NO_2	YES	1.8	2.7	N	~2.75
D60	No entry sign outside 'Schuh' Shoe Shop	Roadside	460294	451883	NO_2	NO	N	1.7	N	~2.75
130	Outside 81 Low Mill Close	Roadside	463663	451054	NO_2	NO	13.6	1.1	N	~2.75
115	Inside Bus Stop (opposite side of road from tube 114) Rougier Street	Roadside	459962	451771	NO_2	YES	47	1.5	N	~2.75

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.3 – Annual Mean NO_2 Monitoring Results: Automatic Monitoring (µg/m^3)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2023 (%) (2)	2019	2020	2021	2022	2023
Bootham	460022	452777	Urban Background	99.1	99.1	14.9	12.9	12.7	12.6	11.8
Fishergate	460746	451038	Roadside	98.7	98.7	26.1	18.8	19.8	19.2	17.3
Holgate	459512	451282	Roadside	95.9	95.9	25.2	20.7	23.6	21.1	21.4
Nunnery Lane	460068	451199	Roadside	87.8	87.8	22.9	16.7	19.8	19.1	17.8
Gillygate	460147	452345	Roadside	98.3	98.3	27.3	23.5	25.5	27.1	25.3
Lawrence Street	461256	451340	Roadside	99.3	99.3	26.9	19.5	21.3	20.0	18.4
Heworth Green	461126	452602	Roadside	98.4	98.4	25.6	19.5	20.3	20.4	17.7
Fulford Road	460937	449464	Roadside	96.3	96.3	22.3	16.6	17.3	16.8	17.0

☒ **Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG22.**

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

☒ **Where exceedances of the NO_2 annual mean objective occur at locations not representative of relevant exposure, the fall-off with distance concentration has been calculated and reported concentration provided in brackets for 2023.**

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**.

All means have been "annualised" as per LAQM.TG22 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%).

Table A.4 – 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 2023 (%) [2]	2019	2020	2021	2022	2023
5	462040	454883	Roadside	91.7	91.7	16.2	14.3	12.1	12.1	11.7
6	459777	451406	Roadside	91.7	91.7	37.3	29.1	33.9	31.1	28.3
7	460217	452421	Roadside	91.7	91.7	**45.4**	38.2	**46.2**	**49.5**	**41.7**
8	460163	452468	Urban Background	91.7	91.7	18.1	12.5	12.7	13.4	13.6
9	460163	452468	Urban Background	91.7	91.7	17.6	12.3	12.6	13.6	13.2
11	458846	450946	Urban Background	91.7	91.7	17.9	12.5	13.2	13.6	12.6
13	460176	452377	Roadside	91.7	91.7	**40.7**	38.0	**46.5**	**45.5**	39.8
14	460167	452347	Roadside	66.7	66.7	**44.3**	**40.2**	**47.5**	**47.3**	39.9 (estimate)
15	461105	451458	Roadside	83.3	83.3	34.7	28.7	30.7	29.5	27.8
16	460160	451152	Roadside	91.7	91.7	35.9	26.2	30.4	29.1	24.1
17	459646	451500	Roadside	91.7	91.7	31.4	25.0	26.0	27.4	22.5
18	460457	452903	Roadside	83.3	83.3	29.9	24.0	30.3	29.7	25.4
25	461721	452709	Roadside	91.7	91.7	22.4	17.1	18.8	18.0	17.6
26	460829	453524	Roadside	83.3	83.3	26.7	21.0	26.4	25.8	24.0
33	460598	453227	Roadside	91.7	91.7	23.5	20.0	22.5	21.8	19.4
35	457603	451492	Roadside	91.7	91.7	23.5	18.4	19.7	18.8	17.6
37	459522	451187	Roadside	91.7	91.7	29.6	22.6	23.2	23.1	21.0
44	460679	452326	Roadside	91.7	91.7	22.3	18.4	18.9	17.8	16.2
45	460319	452754	Roadside	91.7	91.7	31.4	25.7	28.9	29.5	25.1
47	462009	456996	Roadside	91.7	91.7	26.8	21.0	22.1	22.6	21.8
60	461017	451781	Roadside	91.7	91.7	22.9	17.2	17.2	15.0	15.3
78	460149	452342	Roadside	83.3	83.3	28.6	23.9	27.2	27.1	23.1
79	460149	452342	Roadside	75.0	75.0	29.4	24.3	26.2	26.7	24.4
80	460149	452342	Roadside	75.0	75.0	29.8	24.8	29.4	26.5	23.7
83	461597	452830	Urban Background	83.3	83.3	19.9	13.8	14.9	14.6	13.8

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 2023 (%) [2]	2019	2020	2021	2022	2023
88	463354	451972	Urban Background	91.7	91.7	13.8 (estimate)	9.9	9.3	10.4	9.2
90	459997	450109	Roadside	91.7	91.7	15.7	10.9	11.0	11.4	10.1
96	460978	449452	Roadside	91.7	91.7	20.9	14.4	15.2	14.8	14.2
100	456228	453312	Roadside	91.7	91.7	18.3	13.2	14.3	14.1	11.2
101	459746	455897	Roadside	91.7	91.7	31.2	23.0	24.5	22.5	22.3
102	458703	452429	Roadside	91.7	91.7	30.8	23.7	28.8	25.4	25.9
103	458703	452429	Roadside	91.7	91.7	30.5	21.7	29.1	28.5	26.3
104	458703	452429	Roadside	91.7	91.7	31.4	24.4	29.2	28.4	27.0
107	458779	452387	Roadside	91.7	91.7	18.7	14.0	15.9	15.5	14.1
108	458814	452373	Roadside	75.0	75.0	22.3	18.8	20.1	20.6	19.3
109	459924	451833	Roadside	91.7	91.7	**46.7**	38.8	39.3	**43.7**	36.6
110	459985	451727	Roadside	75.0	75.0	**45.3**	34.4	39.3	37.2	31.6
111	459917	451728	Roadside	66.7	66.7	28.0	19.8	20.6	17.8	19.6 (estimate)
112	459873	451684	Roadside	91.7	91.7	23.3	17.7	17.3	17.0	16.3
114	459981	451778	Roadside	91.7	91.7	38.5	29.0	33.8	34.4	30.0
116	458212	452037	Roadside	75.0	75.0	25.9	19.4	22.5	21.6	20.6
125	463194	451967	Roadside	83.3	83.3	14.2	12.0	10.6	11.5	11.3
126	463482	451896	Roadside	75.0	75.0	16.0	13.9	13.9	13.0	11.9
127	461108	452313	Roadside	91.7	91.7	19.5	17.6	18.3	20.1	16.9
128	458686	452369	Roadside	91.7	91.7	19.1	13.5	14.9	15.1	13.8
129	455968	453397	Roadside	83.3	83.3	16.7	11.2	12.7	12.4	11.2
2a	460746	451034	Roadside	91.7	91.7	24.1	17.6	18.7	17.9	16.4
2b	460746	451034	Roadside	91.7	91.7	24.8	18.1	18.4	18.1	16.9
2c	460746	451034	Roadside	83.3	83.3	23.4	18.0	18.8	18.4	17.8
3a	460024	452767	Urban Background	91.7	91.7	16.4	12.3	12.0	12.0	11.8
3b	460024	452767	Urban Background	91.7	91.7	16.8	11.6	12.5	11.7	10.8
3c	460024	452767	Urban Background	91.7	91.7	16.8	11.9	13.8	12.5	11.7

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 2023 (%) [2]	2019	2020	2021	2022	2023
95a	460938	449465	Roadside	83.3	83.3	21.9	16.8	16.9	16.4	15.9
95b	460938	449465	Roadside	75.0	75.0	22.4	16.6	16.3	17.3	16.8
95c	460938	449465	Roadside	75.0	75.0	22.7	16.5	16.5	16.6	17.1
9a	460163	452468	Urban Background	91.7	91.7	18.3	12.4	12.6	13.3	13.3
A1	460088	452263	Roadside	91.7	91.7	**43.0**	36.4	**43.6**	**44.1**	**42.6**
A11	459341	453042	Roadside	91.7	91.7	29.8	23.6	25.8	24.8	25.6
A12	459251	453008	Roadside	91.7	91.7	27.7	20.1	22.4	22.6	22.3
A13	459335	452931	Urban Background	91.7	91.7	17.3	12.9	13.8	13.0	12.4
A14	459335	452931	Urban Background	91.7	91.7	17.7	13.0	13.6	12.4	13.3
A14a	459335	452931	Urban Background	91.7	91.7	17.8	12.3	13.5	12.8	12.9
A17	458578	452472	Roadside	91.7	91.7	27.6	21.5	24.7	23.0	22.9
A19	458713	452414	Roadside	91.7	91.7	27.2	21.7	22.7	23.6	22.5
A19a	458713	452414	Roadside	83.3	83.3	27.4	20.9	23.3	23.1	21.9
A19b	458713	452414	Roadside	91.7	91.7	27.2	21.3	22.7	22.7	21.7
A2	459917	452405	Roadside	91.7	91.7	30.0	23.8	25.7	26.1	23.7
A20	458760	452404	Roadside	91.7	91.7	30.0	23.5	27.2	25.4	26.1
A20a	458760	452404	Roadside	91.7	91.7	29.4	22.5	28.6	25.4	25.8
A20b	458760	452404	Roadside	91.7	91.7	29.1	23.7	28.9	26.6	26.3
A21	458806	452326	Urban Background	91.7	91.7	21.5	15.5	14.9	16.6	15.1
A22	458792	452242	Urban Background	91.7	91.7	21.2	14.5	15.8	16.9	16.2
A25	458706	452225	Roadside	91.7	91.7	20.2	15.0	18.0	18.2	17.5
A29	456939	453013	Urban Background	91.7	91.7	19.3	12.9	15.2	17.0	15.1
A3	459822	452492	Roadside	83.3	83.3	27.4	21.7	23.4	22.2	22.4
A30	457060	452888	Urban Background	91.7	91.7	19.7	13.3	15.8	15.1	14.8

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 2023 (%) [2]	2019	2020	2021	2022	2023
A36	457625	452446	Urban Background	75.0	75.0	18.4 (estimate)	11.4 (estimate)	13.7 (estimate)	14.1 (estimate)	11.8
A38	457857	452334	Urban Background	91.7	91.7	16.3	11.8	12.6	13.0	12.1
A4	459699	452638	Urban Background	91.7	91.7	20.0	13.9	14.5	15.6	15.5
A40	458109	452196	Urban Background	91.7	91.7	21.2	14.0	16.3	16.1	15.3
A41	458172	452108	Roadside	83.3	83.3	20.7	15.3	18.1	16.8	15.6
A45	458384	451817	Urban Background	91.7	91.7	16.3	10.6	12.0	12.5	12.2
A50	458732	451393	Roadside	91.7	91.7	26.2	21.4	22.5	23.8	21.0
A51	458827	451348	Urban Background	83.3	83.3	22.1	15.4	17.9	18.4	16.7
A52	458945	451254	Roadside	91.7	91.7	30.7	24.6	27.9	26.6	25.3
A53	459066	451239	Roadside	91.7	91.7	30.6	23.4	28.1	27.5	24.2
A54	459254	451223	Roadside	58.3	58.3	31.4	25.1	30.9	27.9	28.5 (estimate)
A55	459351	451221	Roadside	91.7	91.7	30.1	24.2	28.0	26.8	24.6
A56	459470	451268	Urban Background	83.3	83.3	28.1	19.8	21.7	22.3	22.0
A57	459533	451280	Roadside	91.7	91.7	**45.5**	33.7	**43.5**	38.1	35.9
A6	459536	452811	Roadside	91.7	91.7	23.5	17.9	18.5	18.9	17.5
A60	458906	453276	Urban Background	91.7	91.7	14.7	9.7	10.7	11.2	10.9
A62	458806	453483	Urban Background	91.7	91.7	15.3	10.1	11.2	11.9	11.5
A64	460030	452327	Roadside	91.7	91.7	28.6	20.8	24.8	23.7	23.8
A66	458672	453685	Urban Background	83.3	83.3	16.3	10.6	12.0	12.7	11.8
A69	458375	453958	Urban Background	75.0	75.0	14.8	9.7	11.7	11.7	10.4
A7	459441	452892	Roadside	91.7	91.7	24.3	18.8	20.8	19.4	18.7
A70	458299	454070	Urban Background	91.7	91.7	17.5	11.5	13.6	13.7	13.2

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 2023 (%) [2]	2019	2020	2021	2022	2023
A71	458121	454254	Urban Background	91.7	91.7	14.7	10.0	10.5	10.4	10.6
A74	458041	454371	Urban Background	75.0	75.0	14.4	9.7	10.8	11.5	9.8
A77	457929	454537	Urban Background	91.7	91.7	20.1	13.4	13.9	15.7	14.6
A81	457733	454805	Urban Background	83.3	83.3	17.9	12.3	12.0	12.8	12.5
A85	459364	453009	Urban Background	91.7	91.7	21.4	14.5	16.1	17.3	16.1
A88	457470	452550	Urban Background	91.7	91.7	17.9	11.4	12.9	13.5	13.0
A9	459295	453067	Roadside	75.0	75.0	28.8	22.8	25.7	25.2	23.7
A90	459238	453157	Roadside	91.7	91.7	32.1	25.6	32.7	30.3	31.7
A94	458651	452426	Roadside	83.3	83.3	27.8	20.1	23.2	18.3	19.2
A96	459038	452850	Roadside	91.7	91.7	29.9	21.5	25.7	25.0	24.1
A97	457431	452616	Roadside	91.7	91.7	18.9	14.3	16.0	16.7	14.9
A98	458666	451468	Roadside	91.7	91.7	22.8	17.0	19.4	18.5	16.8
B1	460848	452582	Roadside	83.3	83.3	28.9	18.2	15.9	15.2	15.1
B15	461294	455305	Roadside	91.7	91.7	18.5	15.1	15.5	15.2	14.4
B19	461891	455876	Roadside	91.7	91.7	19.3	16.2	15.4	15.9	15.0
B2	460924	452697	Roadside	83.3	83.3	24.0	17.9	19.4	18.7	17.3
B29	461453	452750	Roadside	91.7	91.7	19.3	15.6	15.7	14.6	14.7
B3	460952	452826	Roadside	91.7	91.7	21.5	15.9	17.7	16.8	16.0
B36	462565	454194	Urban Background	75.0	75.0	15.4	10.4	10.9	9.9	10.8
B37	462565	454194	Urban Background	83.3	83.3	14.5	9.6	9.8	10.4	10.4
B37a	462565	454194	Urban Background	83.3	83.3	13.9	10.5	10.2	10.9	10.1
B38	463757	455155	Urban Background	91.7	91.7	17.2	11.9	12.5	12.7	12.0
B41	461326	451330	Urban Background	91.7	91.7	30.1	20.0	23.7	23.2	21.8

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 2023 (%) (2)	2019	2020	2021	2022	2023
B42	461430	451348	Urban Background	91.7	91.7	23.3	15.5	18.4	17.3	15.7
B43	461557	451343	Urban Background	91.7	91.7	20.0	14.3	15.9	15.7	14.4
B44	461643	451343	Roadside	91.7	91.7	28.9	23.1	25.3	23.6	21.5
B45	461849	451284	Roadside	91.7	91.7	26.2	18.7	22.4	21.1	18.2
B47	462019	451289	Urban Background	83.3	83.3	15.8	11.2	11.8	11.7	10.2
B48	462122	451289	Urban Background	91.7	91.7	19.0	11.8	14.5	14.5	13.7
B50	462291	451269	Roadside	91.7	91.7	22.7	15.8	17.1	17.1	15.7
B51	462384	451298	Urban Background	91.7	91.7	18.2	12.8	13.0	12.9	12.4
B56	462888	451289	Roadside	91.7	91.7	28.6	20.8	22.7	21.3	21.1
B58	462970	451300	Urban Background	91.7	91.7	19.0	12.7	12.6	13.8	13.0
B60	463234	451339	Urban Background	91.7	91.7	19.0	12.1	13.7	13.4	13.6
B63	462704	451300	Roadside	91.7	91.7	29.2	22.4	23.2	22.4	22.2
B72	461122	451374	Roadside	75.0	75.0	38.9	32.5	33.7	33.8	30.9
B74	461371	452708	Urban Background	83.3	83.3	18.9	13.7	13.4	14.1 (estimate)	12.5
B80	461185	452663	Urban Background	91.7	91.7	17.3	12.2	12.5	11.8	12.4
B82	460974	452563	Urban Background	91.7	91.7	24.1	17.4	17.3	19.7	17.5
B83	461285	452695	Roadside	91.7	91.7	24.6	21.1	20.7	19.1	20.5
B84	462654	451293	Urban Background	91.7	91.7	22.3	15.1	16.9	17.1	16.8
B85	461227	451368	Roadside	91.7	91.7	28.7	20.8	24.9	22.8	20.6
B86	461116	452602	Roadside	91.7	91.7	23.0	18.6	21.1	17.3	16.8
B88	462799	451291	Roadside	91.7	91.7	26.8	19.9	20.4	20.9	18.7
B90	461133	451394	Roadside	91.7	91.7	36.0	27.5	28.5	25.1	24.3
B91	461142	451365	Roadside	83.3	83.3	-	-	-	28.8	27.7

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 2023 (%) [2]	2019	2020	2021	2022	2023
C12	458825	449928	Urban Background	91.7	91.7	18.6	12.1	13.1	13.0	12.3
C17	459085	450544	Urban Background	91.7	91.7	16.2	11.4	12.1	12.8	12.0
C18	459204	450772	Urban Background	91.7	91.7	25.3	17.0	16.8	16.6	21.6
C19	459271	450819	Urban Background	91.7	91.7	17.5	11.7	12.8	12.8	13.2
C2	458333	448974	Roadside	83.3	83.3	29.8	24.4	25.8	25.8	21.7
C20	459280	450923	Urban Background	91.7	91.7	19.3	14.9	14.1	16.4	16.1
C21	459410	451040	Roadside	91.7	91.7	24.9	20.6	18.7	18.4	18.1
C22	459570	451195	Urban Background	91.7	91.7	21.0	15.2	15.4	15.4	14.9
C23	459553	451252	Roadside	91.7	91.7	35.7	29.5	28.9	30.4	27.3
C26	459639	451334	Roadside	91.7	91.7	38.3	31.2	34.1	31.7	30.6
C27	459717	451433	Roadside	91.7	91.7	**44.0**	35.0	**40.7**	**41.3**	37.1
C28	461201	448386	Urban Background	91.7	91.7	16.4	10.8	11.1	11.3	10.4
C29	461196	448426	Roadside	91.7	91.7	26.8	19.6	20.3	20.6	20.7
C30	461185	448462	Roadside	83.3	83.3	30.0	22.7	23.7	21.5	21.7
C31	461193	448473	Urban Background	91.7	91.7	18.0	12.0	12.7	13.0	13.2
C32	461128	448823	Urban Background	91.7	91.7	22.9	15.0	15.8	17.1	17.5
C33	461085	448933	Urban Background	83.3	83.3	16.7	10.5	11.0	11.5	10.8
C34	461085	449067	Roadside	83.3	83.3	23.5	16.2	17.3	17.2	17.3
C36	461052	449146	Roadside	91.7	91.7	25.3	19.7	20.1	20.6	19.7
C37	461045	449223	Urban Background	91.7	91.7	21.2	14.2	15.7	16.1	15.1
C38	461038	449225	Roadside	91.7	91.7	25.2	17.1	18.2	18.1	18.7
C39	460974	449336	Roadside	83.3	83.3	33.1	22.9	22.8	22.2	24.9
C4	458470	449126	Urban Background	91.7	91.7	18.2	12.5	12.5	12.9	12.0

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 2023 (%) [2]	2019	2020	2021	2022	2023
C40	460910	449628	Urban Background	83.3	83.3	18.7	12.6	12.9	13.7	13.4
C42	460857	449748	Urban Background	91.7	91.7	21.8	14.3	15.2	15.9	16.5
C43	460869	449730	Roadside	91.7	91.7	25.1	18.4	19.3	19.7	20.0
C43a	460869	449730	Roadside	91.7	91.7	26.5	19.3	20.2	20.6	20.9
C44	460869	449730	Roadside	91.7	91.7	27.0	19.6	19.7	20.6	20.1
C49	460860	450530	Urban Background	91.7	91.7	20.0	13.0	14.3	14.2	13.1
C51	460871	450727	Roadside	66.7	66.7	25.5	17.9	19.3	18.1	18.9 (estimate)
C52	460853	450781	Roadside	91.7	91.7	22.6	17.8	17.2	18.1	16.3
C53	460766	450924	Roadside	25.0	25.0	22.0	15.2 (estimate)	16.0 (estimate)	16.5 (estimate)	16.7 (estimate)
C54	460762	451069	Roadside	91.7	91.7	24.7	18.4	21.3	20.0	19.7
C56	459484	451141	Roadside	83.3	83.3	30.5	21.8	25.0	24.8	22.4
C57	458912	450111	Urban Background	91.7	91.7	20.6	14.4	14.4	15.3	14.4
C58	460926	449429	Roadside	91.7	91.7	33.0	24.6	25.4	26.0	25.0
C59	458735	449713	Roadside	91.7	91.7	27.1	22.3	23.3	25.0	21.7
C62	459579	451251	Roadside	91.7	91.7	26.4	20.1	20.8	21.3	19.1
C63	458790	449740	Roadside	91.7	91.7	18.1	13.3	13.8	12.0	12.1
C7	458611	449477	Roadside	91.7	91.7	19.2	14.9	15.4	13.1	13.3
D10	460443	451927	Urban Background	91.7	91.7	19.1	11.3	12.5	13.3	12.6
D12	460567	451740	Roadside	91.7	91.7	19.4	15.7	14.3	14.2	12.9
D13	460271	451358	Roadside	91.7	91.7	24.9	20.4	17.6	18.4	16.7
D14	461077	451354	Roadside	83.3	83.3	36.6	28.2	30.8	28.0	28.4
D16	460708	451231	Roadside	91.7	91.7	37.8	29.2	32.9	30.4	28.8
D17	460575	451616	Roadside	83.3	83.3	29.6	23.7	28.5	30.9	24.7
D18	460395	451502	Roadside	75.0	75.0	28.7	23.1	24.2	22.7	20.4
D19	460038	451626	Roadside	91.7	91.7	**45.9**	34.8	**40.5**	38.2	32.4
D20	460323	451685	Roadside	83.3	83.3	38.9	30.1	33.4	36.6	31.2

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 2023 (%) [2]	2019	2020	2021	2022	2023
D22	460035	452010	Roadside	58.3	58.3	31.5	27.2	32.3	30.7	28.9 (estimate)
D24	459805	451543	Roadside	91.7	91.7	27.5	18.9	20.5	19.6	18.0
D25	459693	451750	Roadside	91.7	91.7	37.4	29.0	33.0	34.7	31.9
D26	460671	451400	Roadside	91.7	91.7	25.1	20.2	25.1	23.6	20.7
D27	460734	451563	Roadside	91.7	91.7	22.8	19.5	20.8	19.0	15.9
D28	460764	451185	Roadside	91.7	91.7	32.4	25.0	27.4	26.1	23.5
D30	460834	451252	Roadside	91.7	91.7	24.7	18.6	20.4	18.4	18.0
D31	461002	451229	Roadside	91.7	91.7	28.0	20.6	24.4	22.9	22.2
D32	460258	451208	Roadside	91.7	91.7	34.6	26.4	29.1	27.9	25.0
D33	460075	451174	Roadside	83.3	83.3	26.3	20.7	24.4	24.4	24.4
D35	460134	451170	Roadside	91.7	91.7	37.4	27.2	32.8	30.6	25.7
D36	460135	450884	Roadside	91.7	91.7	31.6	22.8	25.2	24.9	22.8
D37	460157	450988	Roadside	83.3	83.3	27.5	18.7	22.6	20.9	19.7
D38	460088	450929	Roadside	91.7	91.7	22.1	16.8	18.2	16.6	15.8
D39	460185	451055	Roadside	91.7	91.7	29.5	20.4	23.5	23.8	20.7
D4	460560	452300	Roadside	91.7	91.7	25.5	19.2	22.2	21.1	19.6
D40	460069	451196	Roadside	91.7	91.7	25.5	18.9	21.7	19.2	17.4
D41	460286	452487	Roadside	83.3	83.3	32.8	27.9	30.8	31.9	30.8
D43	459920	451834	Roadside	91.7	91.7	**43.6**	34.2	36.9	39.3	30.7
D45	460673	451869	Roadside	91.7	91.7	23.9	17.7	18.7	17.9	16.1
D47	460682	452187	Roadside	83.3	83.3	25.9	20.8	19.3	18.0	18.7
D48	460103	452180	Roadside	83.3	83.3	34.3	28.0	35.1	35.4 (estimate)	30.4
D49	460656	451269	Roadside	91.7	91.7	35.0	24.4	30.0	29.8	25.7
D50	460371	451682	Roadside	83.3	83.3	34.7	27.2	29.1	29.4	27.0
D51	459640	451722	Roadside	91.7	91.7	**55.5**	34.4	35.9	**41.4**	**40.4**
D52	460887	451140	Roadside	91.7	91.7	23.7	17.4	19.3	19.4	13.9
D53	460115	451146	Roadside	91.7	91.7	24.3	19.6	21.9	19.8	17.8
D54	460146	451116	Roadside	91.7	91.7	23.9	18.5	20.6	19.3	18.1
D55	460087	452065	Roadside	91.7	91.7	38.2	33.5	**44.9**	39.2	37.1

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 2023 (%) (2)	2019	2020	2021	2022	2023
D6	460570	452177	Urban Background	91.7	91.7	19.5	13.5	16.2	14.8	13.3
D8	460553	451843	Roadside	75.0	75.0	31.7	28.4	32.2	33.0	30.4
D9	460483	452357	Roadside	83.3	83.3	33.6	25.3	27.7	31.0	28.4
D56	460400	451685	Roadside	83.3	83.3	38.2	31.2	31.8	35.9	35.1
D57	460416	451708	Roadside	83.3	83.3	29.4	25.0	26.1	24.9	22.7
D58	460435	451732	Roadside	91.7	91.7	34.6	26.1	29.5	31.2	29.5
D59	460087	452156	Roadside	91.7	91.7	39.7	35.4	**43.2**	**44.7**	37.5
D60	460294	451883	Roadside	91.7	91.7	21.4	15.6	14.2	15.7	14.4
130	463663	451054	Roadside	50.0	50.0	13.3	10.5	10.1	10.5 (estimate)	9.8 (estimate)
115	459962	451771	Roadside	91.7	91.7	**59.2**	**48.8**	**44.7**	**50.9**	**45.0**

☒ **Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG22.**

☒ **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.TG22 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

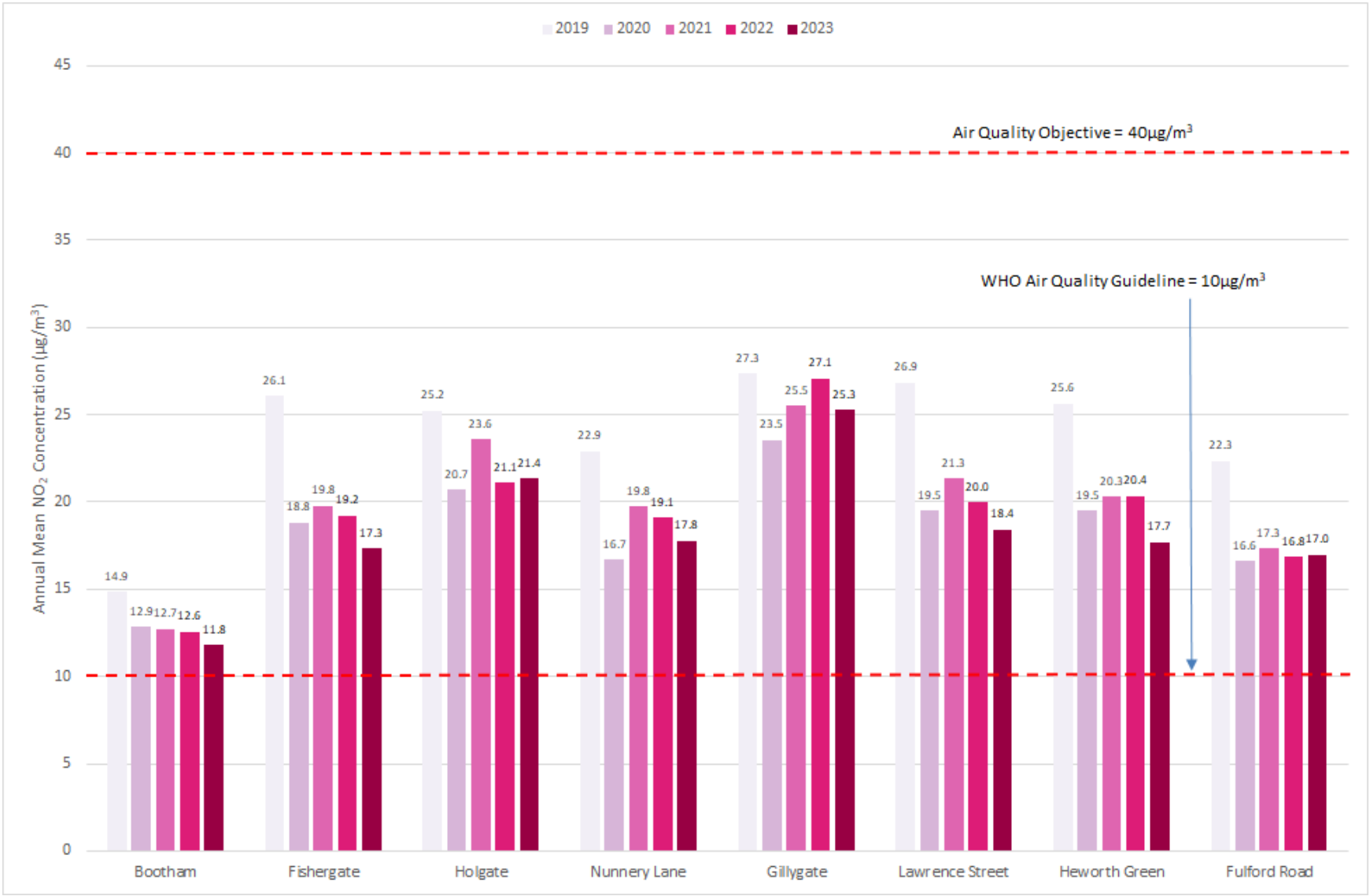


Table A.5 – 1-Hour Mean NO_2 Monitoring Results, Number of 1-Hour Means > 200µg/m^3

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2023 (%) (2)	2019	2020	2021	2022	2023
Bootham	460022	452777	Urban Background	99.1	99.1	0	0	0	0	0
Fishergate	460746	451038	Roadside	98.7	98.7	0	0	0	0	0
Holgate	459512	451282	Roadside	95.9	95.9	0	0	0	0	0
Nunnery Lane	460068	451199	Roadside	87.8	87.8	0	0	0	0	0
Gillygate	460147	452345	Roadside	98.3	98.3	0	0	0	0	0
Lawrence Street	461256	451340	Roadside	99.3	99.3	0	0	0	0	0
Heworth Green	461126	452602	Roadside	98.4	98.4	0	0	0	0	0
Fulford Road	460937	449464	Roadside	96.3	96.3	0 (80.3)	0	0	0	0

Notes:

Results are presented as the number of 1-hour periods where concentrations greater than 200µg/m^3 have been recorded.

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

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

(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.2 – Trends in Number of NO_2 1-Hour Means > 200µg/m^3

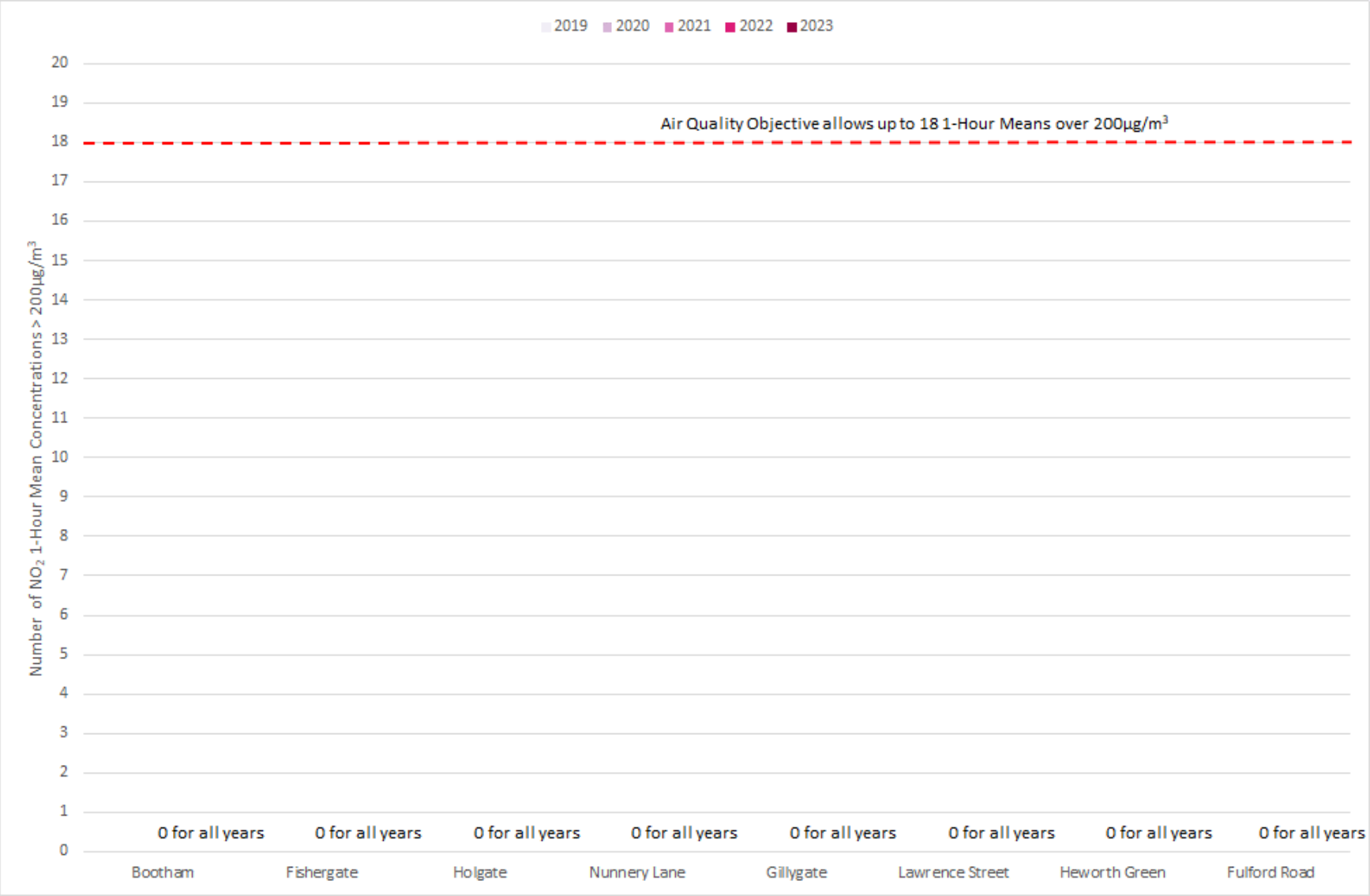


Table A.6 – Annual Mean PM_{10} Monitoring Results (µg/m^3)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2023 (%) (2)	2019	2020	2021	2022	2023
Bootham	460022	452777	Urban Background	96.4	96.4	14.0	15.2	13.4	15.2	11.6
Fishergate	460746	451038	Roadside	97.3	97.3	21.9	19.2	15.8	16.8	13.7
Holgate Road	459512	451282	Roadside	96.2	50.4	13.9	18.4	17.2	17.9	16.8
Plantation Drive	457428	452620	Roadside	95.6	95.6	16.4	15.8	16.0	16.3	15.4

☒ **Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG22.**

Notes:

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

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

All means have been "annualised" as per LAQM.TG22 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

(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.3 – Trends in Annual Mean PM_{10} Concentrations

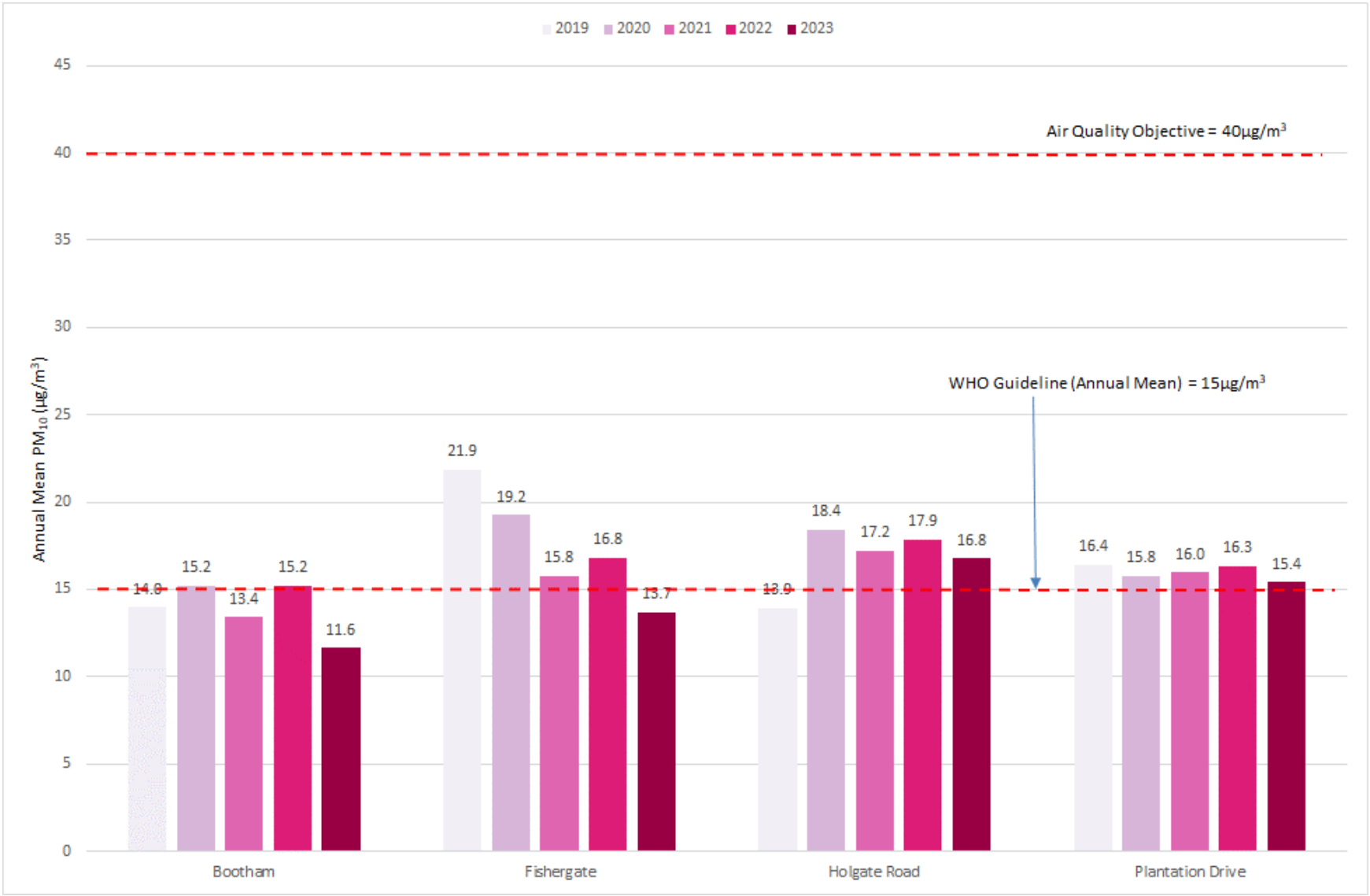


Table A.7 – 24-Hour Mean PM_{10} Monitoring Results, Number of PM_{10} 24-Hour Means > 50µg/m^3

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2023 (%) (2)	2019	2020	2021	2022	2023
Bootham	460022	452777	Urban Background	96.4	96.4	0	2	0	3	0
Fishergate	460746	451038	Roadside	97.3	97.3	8	1	0	6	0
Holgate Road	459512	451282	Roadside	96.2	50.4	0	2	0	2	0 (27.5)
Plantation Drive	457428	452620	Roadside	95.6	95.6	4	1	0	0	0

Notes:

Results are presented as the number of 24-hour periods where daily mean concentrations greater than 50µg/m^3 have been recorded.

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

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

(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.4 – Trends in Number of 24-Hour Mean PM_{10} Results > 50µg/m³

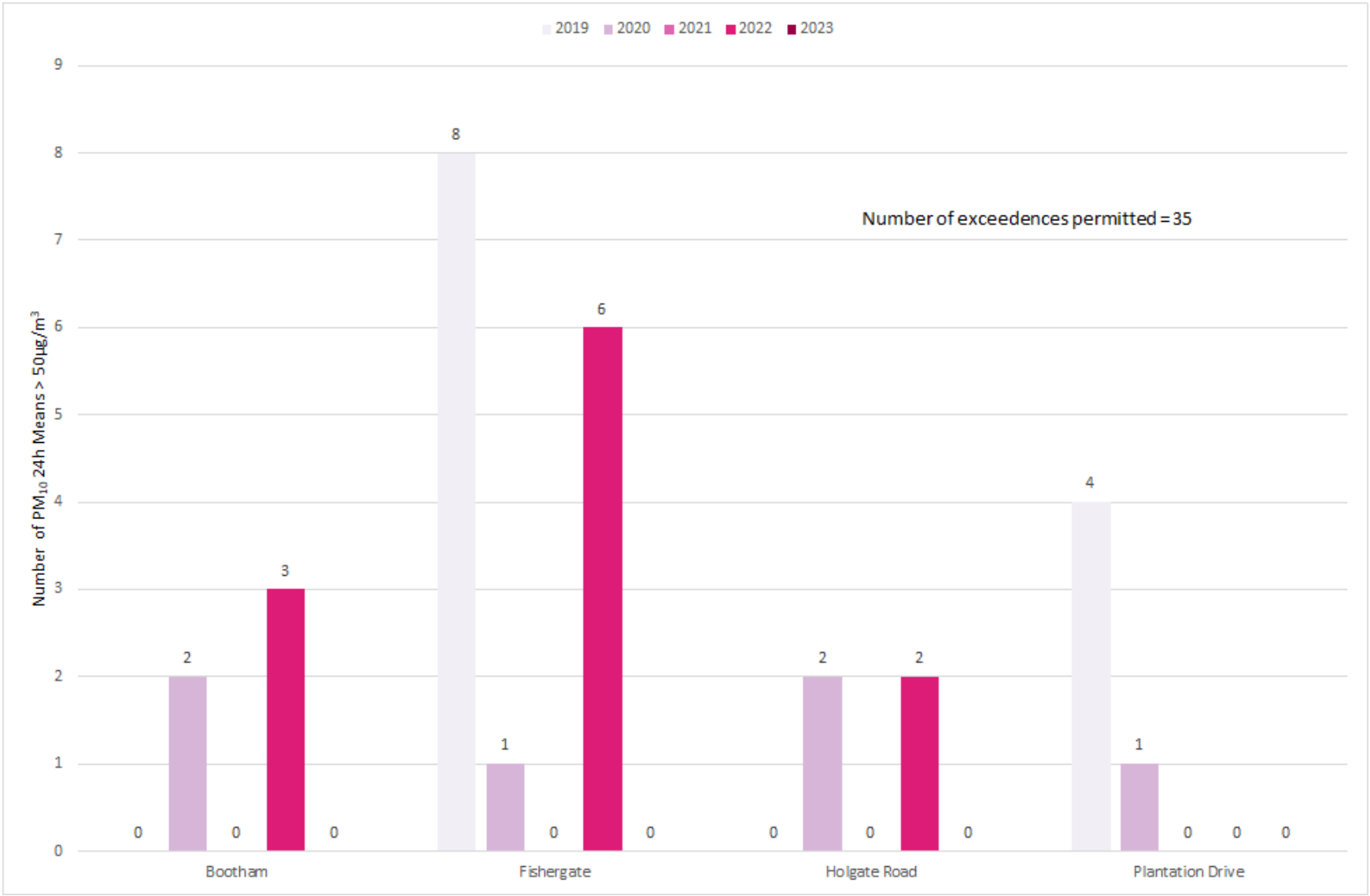


Table A.8 – Annual Mean $PM_{2.5}$ Monitoring Results ($\mu g/m^3$)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2023 (%) (2)	2019	2020	2021	2022	2023
Bootham	460022	452777	Urban Background	97.9	97.9	11.1	8.6	8.4	8.2	7.4
Fishergate	460746	451038	Roadside	93.4	93.4	10.7	7.6	7.9	8.8	8.0
Gillygate	460147	452345	Roadside	79.6	79.6	7.6	7.1	6.1	7.2	7.2
Holgate Road	459512	451282	Roadside	94.9	45.0	-	-	-	-	7.8

☒ **Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG22.**

Notes:

The annual mean concentrations are presented as $\mu g/m^3$.

All means have been “annualised” as per LAQM.TG22 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

(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.5 – Trends in Annual Mean $PM_{2.5}$ Concentrations

Appendix B: Full Monthly Diffusion Tube Results for 2023

Table B.1 – NO_2 2023 Diffusion Tube Results ($\mu g/m^3$)

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (B=0.78, R=0.77)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
5	462040	454883	18.2	23.5	17.2	-	11.2	10.4	4.7	10.0	13.7	20.2	20.2	18.4	15.2	11.7	-	
6	459777	451406	46.6	50.4	39.3	-	37.3	26.2	29.2	34.0	34.6	37.0	48.0	21.3	36.7	28.3	-	
7	460217	452421	59.1	62.2	67.8	-	65.1	58.3	55.6	48.2	45.4	43.7	50.5	40.5	**54.2**	**41.7**	31.6	
8	460163	452468	22.2	22.6	21.2	-	13.3	10.6	17.8	13.1	17.0	19.2	20.8	14.0	17.4	13.6	-	Part of triplicate set - see bottom of table for triplicate average
9	460163	452468	20.4	22.2	20.1	-	14.6	11.5	12.5	12.9	15.8	18.7	20.5	16.9	16.9	13.2	-	Part of triplicate set - see bottom of table for triplicate average
11	458846	450946	11.0	20.5	19.0	-	15.5	13.0	10.5	12.0	15.9	20.4	20.9	18.5	16.1	12.6	-	
13	460176	452377	63.9	65.7	56.0	-	57.0	44.9	51.8	49.7	51.9	46.0	41.9	39.9	**51.7**	39.8	-	
14	460167	452347		59.4	68.9	-			55.8	49.5	56.2	43.0	47.0	45.5	**53.2**	39.9	-	
15	461105	451458		43.5	42.1	-	33.3	31.5	29.4	31.3	38.5	37.7	37.8	36.0	36.1	27.8	-	
16	460160	451152	36.5	41.0	34.8	-	28.3	24.2	26.6	31.2	32.8	18.9	39.2	30.2	31.2	24.1	-	
17	459646	451500	38.0	38.3	33.6	-	28.4	20.8	26.8	26.6	30.2	17.5	37.3	24.5	29.3	22.5	-	
18	460457	452903	26.4	43.7	39.5	-	33.5	29.0		30.1	25.0	33.2	39.0	29.9	32.9	25.4	-	
25	461721	452709	30.9	29.4	25.1	-	19.4	16.2	15.9	16.9	20.4	27.2	27.4	23.2	22.9	17.6	-	
26	460829	453524		41.6	36.9	-	29.5	23.8	26.8	25.4	31.2	29.1	36.3	31.3	31.2	24.0	-	
33	460598	453227	36.2	37.0	32.6	-	22.7	16.7	21.7	19.2	21.6	21.6	22.2	26.3	25.3	19.4	-	
35	457603	451492	26.7	30.8	25.3	-	17.3	16.0	18.7	18.7	19.2	23.7	27.1	27.6	22.8	17.6	-	
37	459522	451187	30.7	37.2	31.8	-	25.3	27.1	20.5	23.4	24.3	29.5	30.8	19.2	27.3	21.0	-	
44	460679	452326	32.1	28.0	22.1	-	16.8	12.8	17.4	18.1	20.1	23.2	20.0	20.2	21.0	16.2	-	
45	460319	452754	38.9	44.9	39.6	-	31.3	28.3	33.5	29.2	30.9	25.2	31.4	25.3	32.6	25.1	-	
47	462009	456996	32.7	35.3	30.5	-	25.6	23.4	26.2	24.5	28.1	25.6	30.6	28.5	28.3	21.8	-	
60	461017	451781	27.3	20.9	21.6	-	16.2	12.4	14.3	16.8	19.6	20.2	27.5	21.3	19.8	15.3	-	
78	460149	452342	35.7	41.1		-	35.0	29.6	27.2	25.1	29.5	23.5	35.1	18.5	30.0	23.1	-	Part of triplicate set - see bottom of table for triplicate average
79	460149	452342	37.3	40.9		-	36.3	28.5	28.1	28.9	32.2		33.2	19.9	31.7	24.4	-	Part of triplicate set - see bottom of table for triplicate average
80	460149	452342	39.4			-	34.2	27.5	31.2	29.2	31.1	23.8	30.1	30.6	30.8	23.7	-	Part of triplicate set - see bottom of table for triplicate average
83	461597	452830	26.2	25.9	17.8	-	14.0	11.3	15.6		13.6	16.1	19.6	16.7	17.7	13.8	-	
88	463354	451972	20.1	17.4	12.1	-	7.9	7.4	9.2	9.6	4.0	12.4	16.7	12.9	11.8	9.2	-	
90	459997	450109	19.2	17.1	14.5	-	11.9	11.0	10.1	9.2	12.2	11.3	16.5	10.7	13.1	10.1	-	

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (B=0.78, R=0.77)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
96	460978	449452	25.6	24.3	19.8	-	11.3	11.9	13.4	13.3	18.9	22.4	25.2	17.0	18.5	14.2	-	
100	456228	453312	13.5	19.6	17.3	-	16.2	12.7	13.4	15.1	17.1	14.3	5.2	15.9	14.6	11.2	-	
101	459746	455897	31.0	38.1	30.7	-	24.8	21.2	27.1	27.0	30.3	28.5	32.4	27.0	28.9	22.3	-	
102	458703	452429	38.3	33.7	38.5	-	39.1	32.5	23.8	30.3	34.2	36.0	37.4	26.2	33.6	25.9	-	Part of triplicate set - see bottom of table for triplicate average
103	458703	452429	35.6	39.3	40.7	-	37.3	31.0	26.9	33.1	36.1	23.6	40.9	31.7	34.2	26.3	-	Part of triplicate set - see bottom of table for triplicate average
104	458703	452429	40.3	40.6	38.7	-	38.8	33.6	26.9	29.0	37.8	27.5	42.6	30.4	35.1	27.0	-	Part of triplicate set - see bottom of table for triplicate average
107	458779	452387	17.7	20.8	21.5	-	14.9	11.2	12.3	15.6	17.9	22.0	26.0	21.9	18.3	14.1	-	
108	458814	452373	35.0	32.2	26.8	-	20.4	14.7		17.9	22.7	27.5		28.7	25.1	19.3	-	
109	459924	451833	50.1	56.2	56.1	-	49.3	46.1	43.3	44.2	46.1	44.8	44.4	42.9	**47.6**	36.6	-	
110	459985	451727	38.7	48.3	49.7	-	38.8	34.7	42.4	32.2	40.3	44.6			**41.1**	31.6	-	
111	459917	451728	33.1	31.7		-	24.1	18.6	17.1	22.5	19.3		31.6		24.8	19.6	-	
112	459873	451684	26.7	25.4	22.4	-	16.5	13.7	16.7	18.6	18.8	25.7	25.4	23.3	21.2	16.3	-	
114	459981	451778	53.1	49.3	33.6	-	44.3	35.6	34.0	36.1	33.7	39.0	36.9	33.1	39.0	30.0	-	
115	459962	451771	72.9	67.4	54.2	-	53.6	54.3	67.9	67.6	70.2	45.9	46.8	42.7	**58.5**	**45.0**	-	
116	458212	452037	36.0	34.3	27.7	-		19.7		23.2	21.9	26.9	29.6	21.8	26.8	20.6	-	
125	463194	451967	20.7	18.9	13.3	-	12.9	8.2		10.4	12.3	15.1	20.0	15.1	14.7	11.3	-	
126	463482	451896		22.8	17.3	-	13.9	11.0	11.5	12.9	14.5		16.5	19.0	15.5	11.9	-	
127	461108	452313	29.9	35.1	27.4	-	17.6	14.8	19.8	20.5	6.6	26.6	24.6	18.9	22.0	16.9	-	
128	458686	452369	23.1	20.3	21.9	-	14.7	13.0	13.2	13.5	16.8	17.4	23.0	20.8	18.0	13.8	-	
129	455968	453397		19.0	14.3	-	11.6	9.3	11.0	11.2	18.2	16.3	18.0	16.8	14.6	11.2	-	
130	463663	451054	18.2	17.2	12.9	-			7.5				16.8	13.4	14.3	9.8	-	
2a	460746	451034	19.2	26.3	25.7	-	19.9	17.7	15.6	17.2	21.4	25.6	30.4	15.7	21.3	16.4	-	Part of triplicate set - see bottom of table for triplicate average
2b	460746	451034	27.2	25.1	24.6	-	17.8	17.9	16.3	19.5	20.5	22.4	29.0	21.6	22.0	16.9	-	Part of triplicate set - see bottom of table for triplicate average
2c	460746	451034		26.2	25.7	-	20.5	19.6	15.8	23.4	26.3	22.2	29.2	22.1	23.1	17.8	-	Part of triplicate set - see bottom of table for triplicate average
3a	460024	452767	13.6	21.9	19.3	-	10.8	8.4	12.5	9.8	14.6	16.6	20.8	18.0	15.1	11.8	-	Part of triplicate set - see bottom of table for triplicate average
3b	460024	452767	19.9	21.8	17.5	-	10.5	8.6	11.1	11.1	14.4	15.1	6.9	15.5	13.9	10.8	-	Part of triplicate set - see bottom of table for triplicate average
3c	460024	452767	21.5	21.6	17.5	-	9.9	8.8	9.6	10.7	15.2	16.6	17.6	16.2	15.0	11.7	-	Part of triplicate set - see bottom of table for triplicate average

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (B=0.78, R=0.77)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
95a	460938	449465	26.1	28.0	24.1	-	16.8	16.5	18.5	18.2	17.1	23.0		18.5	20.7	15.9	-	Part of triplicate set - see bottom of table for triplicate average
95b	460938	449465		27.7	23.4	-	18.3	24.7	18.6	19.8	20.1	22.6		21.4	21.8	16.8	-	Part of triplicate set - see bottom of table for triplicate average
95c	460938	449465	30.5	27.8	23.9	-	19.5		17.8	18.3	19.6	23.8		19.1	22.3	17.1	-	Part of triplicate set - see bottom of table for triplicate average
9a	460163	452468	24.2	21.4	20.7	-	12.8	10.0	12.7	11.7	15.7	15.4	22.5	20.0	17.0	13.3	-	Part of triplicate set - see bottom of table for triplicate average
A1	460088	452263	63.4	67.9	67.0	-	52.6	47.8	53.4	44.8	53.4	51.3	52.3	54.4	**55.3**	**42.6**	-	
A11	459341	453042	32.3	41.4	38.0	-	32.0	28.7	28.1	31.3	29.0	29.6	40.1	35.0	33.2	25.6	-	
A12	459251	453008	35.3	35.1	34.0	-	26.5	27.9	22.4	27.1	25.9	23.7	37.5	23.3	29.0	22.3	-	
A13	459335	452931	20.8	22.3	19.0	-	12.5	10.7	10.5	12.2	14.1	14.8	23.9	13.4	15.8	12.4	-	Part of triplicate set - see bottom of table for triplicate average
A14	459335	452931	21.0	22.0	19.5	-	13.4	11.0	10.4	11.8	13.9	18.6	20.9	25.1	17.1	13.3	-	Part of triplicate set - see bottom of table for triplicate average
A14a	459335	452931	21.0	22.5	17.2	-	13.7	11.6	11.1	12.5	15.4	18.0	23.8	15.8	16.6	12.9	-	Part of triplicate set - see bottom of table for triplicate average
A17	458578	452472	37.6	35.3	31.9	-	26.5	21.6	21.9	26.2	27.8	33.1	33.8	31.1	29.7	22.9	-	
A19	458713	452414	37.9	28.2	31.3	-	24.3	23.4	28.2	24.7	28.9	31.3	36.7	26.2	29.2	22.5	-	Part of triplicate set - see bottom of table for triplicate average
A19a	458713	452414	36.0	35.3	31.1	-	24.3	19.4	22.2	24.7	29.9	28.3	33.1		28.4	21.9	-	Part of triplicate set - see bottom of table for triplicate average
A19b	458713	452414	34.9	35.3	30.4	-	25.2	21.2	24.4	24.2	29.4	29.4	33.4	22.5	28.2	21.7	-	Part of triplicate set - see bottom of table for triplicate average
A2	459917	452405	37.0	38.9	33.2	-	24.8	20.4	23.4	28.3	31.1	31.8	36.2	33.2	30.8	23.7	-	
A20	458760	452404	39.6	38.3	36.7	-	41.3	29.1	22.9	26.2	34.9	40.9	38.0	25.5	33.9	26.1	-	Part of triplicate set - see bottom of table for triplicate average
A20a	458760	452404	37.6	38.9	38.2	-	35.7	30.8	25.2	29.7	32.6	36.6	38.2	25.3	33.5	25.8	-	Part of triplicate set - see bottom of table for triplicate average
A20b	458760	452404	37.4	38.3	38.2	-	37.1	28.0	24.6	29.7	35.7	33.6	41.8	31.1	34.1	26.3	-	Part of triplicate set - see bottom of table for triplicate average
A21	458806	452326	25.0	26.0	21.1	-	14.0	12.5	15.9	13.7	14.7	22.0	24.3	23.2	19.3	15.1	-	
A22	458792	452242	27.8	25.8	22.4	-	17.5	12.5	17.0	16.4	20.5	18.3	26.3	24.3	20.8	16.2	-	
A25	458706	452225	27.3	28.1	25.3	-	21.6	16.5	16.5	18.0	21.9	24.4	28.6	22.3	22.8	17.5	-	
A29	456939	453013	25.9	24.5	21.5	-	16.2	13.5	16.2	13.4	20.3	19.5	22.9	19.3	19.4	15.1	-	
A3	459822	452492	28.5	34.2	29.9	-	27.0	24.8		23.8	34.8	27.4	28.9	31.9	29.1	22.4	-	
A30	457060	452888	26.0	25.5	20.3	-	19.5	16.9	14.9	15.7	13.3	19.2	23.5	14.2	19.0	14.8	-	

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (B=0.78, R=0.77)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
A36	457625	452446	24.4			-	15.6	12.3	11.7	10.6	13.5	14.1	17.9	16.0	15.1	11.8	-	
A38	457857	452334	21.3	17.1	18.6	-	14.8	11.9	10.0	11.3	14.4	17.2	16.5	17.1	15.5	12.1	-	
A4	459699	452638	23.4	24.7	19.9	-	13.6	12.4	16.8	15.8	20.0	21.7	25.7	23.9	19.8	15.5	-	
A40	458109	452196	21.8	23.3	22.6	-	21.8	21.6	11.4	16.7	18.3	20.6	20.3	17.7	19.6	15.3	-	
A41	458172	452108	24.3	24.7	26.1	-	22.5	21.7	13.8	17.7	12.2		21.4	18.3	20.3	15.6	-	
A45	458384	451817	20.1	19.9	18.2	-	14.2	9.6	7.1	11.3	13.2	19.8	21.1	17.5	15.6	12.2	-	
A50	458732	451393	31.3	32.5	30.9	-	29.2	26.6	23.8	20.2	24.1	28.0	29.1	24.8	27.3	21.0	-	
A51	458827	451348	27.0	27.8	23.1	-	16.6		19.5	18.4	19.6	20.3	24.4	17.7	21.4	16.7	-	
A52	458945	451254	39.9	39.9	36.0	-	32.3	32.5	24.1	28.0	26.8	31.9	39.4	31.3	32.9	25.3	-	
A53	459066	451239	41.1	38.9	37.5	-	29.1	28.2	31.2	24.6	28.8	26.4	34.2	25.2	31.4	24.2	-	
A54	459254	451223			37.8	-	33.8	32.7	30.5		33.8	33.0	40.4		34.6	28.5	-	
A55	459351	451221	36.1	41.0	35.8	-	31.5	27.6	28.3	29.9	28.8	30.0	30.4	32.2	32.0	24.6	-	
A56	459470	451268	33.4	29.5	30.7	-	27.9	15.4	20.3	46.3	20.9	25.6	32.3		28.2	22.0	-	
A57	459533	451280	54.1	59.8	60.7	-	60.6	54.8	40.6	23.4	43.4	47.8	41.6	26.4	**46.7**	35.9	-	
A6	459536	452811	29.0	27.4	23.8	-	16.9	14.8	19.2	17.0	25.2	23.1	29.9	24.3	22.8	17.5	-	
A60	458906	453276	19.1	19.1	14.5	-	12.1	11.9	8.5	11.0	12.7	14.8	15.8	14.9	14.0	10.9	-	
A62	458806	453483	21.7	20.4	15.9	-	10.6	9.0	9.9	11.3	13.7	15.9	17.6	16.5	14.8	11.5	-	
A64	460030	452327	27.9	33.1	34.5	-	35.1	31.5	23.7	30.5	33.2	27.3	35.5	27.0	30.8	23.8	-	
A66	458672	453685	20.9	20.1	16.4	-	11.8	10.2	11.6	9.6	12.1	16.5	22.0		15.1	11.8	-	
A69	458375	453958	15.5	15.4	17.5	-	12.5	9.7	8.2	10.4	13.9		16.5		13.3	10.4	-	
A7	459441	452892	32.3	34.3	28.3	-	18.4	14.8	21.2	21.1	23.0	27.1	30.3	16.1	24.3	18.7	-	
A70	458299	454070	22.2	20.8	19.1	-	15.0	12.4	11.3	14.4	19.0	17.1	20.4	13.9	16.9	13.2	-	
A71	458121	454254	18.7	18.1	13.9	-	10.3	7.4	8.3	9.2	12.6	14.2	19.0	17.2	13.5	10.6	-	
A74	458041	454371		18.9	14.4	-	9.7	7.4	10.0	10.1	12.5	14.2		16.2	12.6	9.8	-	
A77	457929	454537	28.6	26.7	20.6	-	13.7	9.6	13.1	13.3	14.1	20.8	25.2	19.5	18.7	14.6	-	
A81	457733	454805	24.6	22.5	17.4	-	14.6	9.5	9.4		12.9	16.6	19.0	13.2	16.0	12.5	-	
A85	459364	453009	23.3	26.1	20.2	-	15.9	13.2	18.2	17.2	21.7	22.2	26.5	22.1	20.6	16.1	-	
A88	457470	452550	22.6	22.3	19.5	-	13.7	13.2	11.0	11.6	13.6	19.3	19.5	17.6	16.7	13.0	-	
A9	459295	453067	36.3	40.3	36.7	-	32.4	22.6		24.5	22.4	30.9		31.3	30.8	23.7	-	
A90	459238	453157	51.1	51.5	42.8	-	35.5	30.6	39.7	38.6	40.8	40.0	36.3	45.6	**41.1**	31.7	-	
A94	458651	452426	40.4	36.6	38.3	-	31.1	8.9	10.9	12.2	14.3		27.8	29.1	25.0	19.2	-	
A96	459038	452850	33.2	39.5	34.2	-	31.1	23.6	26.7	29.1	25.6	32.5	41.6	26.6	31.2	24.1	-	
A97	457431	452616	23.8	26.5	20.5	-	14.6	13.2	15.2	11.9	17.7	22.6	25.8	21.2	19.4	14.9	-	
A98	458666	451468	30.8	24.2	23.5	-	21.3	16.1	16.3	17.8	18.9	24.1	22.2	24.3	21.8	16.8	-	
B1	460848	452582	25.4		22.1	-	14.7	11.8	16.0	15.1	19.3	21.2	25.7	24.6	19.6	15.1	-	
B15	461294	455305	22.7	27.5	24.6	-	17.0	14.6	16.3	15.6	17.0	9.9	21.0	19.7	18.7	14.4	-	
B19	461891	455876	26.1	30.2	21.8	-	16.6	12.8	14.5	15.8	16.7	18.1	21.9	20.3	19.5	15.0	-	

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (B=0.78, R=0.77)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
B2	460924	452697	28.6	30.0	26.0	-	18.4	14.7	16.2	17.3	22.7		27.4	22.9	22.4	17.3	-	
B29	461453	452750	27.1	24.0	19.6	-	17.8	11.8	13.8	14.9	17.5	19.8	27.1	16.5	19.1	14.7	-	
B3	460952	452826	23.8	27.9	25.7	-	17.5	14.6	15.2	15.8	19.4	23.1	23.5	21.4	20.7	16.0	-	
B36	462565	454194		21.1	14.6	-	10.4	8.5		10.1	9.9	14.5	20.4	15.6	13.9	10.8	-	Part of triplicate set - see bottom of table for triplicate average
B37	462565	454194	19.2	21.7	11.4	-	9.3	8.4	9.0	10.1	11.6	12.2	20.9		13.4	10.4	-	Part of triplicate set - see bottom of table for triplicate average
B37a	462565	454194		20.0	14.2	-	11.0	8.9	8.9	11.9	11.3	13.0	14.9	15.5	13.0	10.1	-	Part of triplicate set - see bottom of table for triplicate average
B38	463757	455155	16.6	20.4	19.1	-	11.9	9.0	9.8	10.7	14.3	16.8	22.5	18.6	15.4	12.0	-	
B41	461326	451330	29.9	34.6	31.0	-	24.4	19.8	22.2	26.1	27.5	31.1	34.9	25.6	27.9	21.8	-	
B42	461430	451348	24.7	25.9	23.2	-	18.4	16.5	14.7	19.0	18.4	23.5	19.7	17.2	20.1	15.7	-	
B43	461557	451343	22.8	24.1	21.2	-	18.2	17.4	12.8	15.8	17.8	21.9	14.3	16.8	18.5	14.4	-	
B44	461643	451343	36.4	37.8	29.1	-	23.0	21.4	22.1	23.2	28.9	28.9	30.0	26.9	28.0	21.5	-	
B45	461849	451284	28.0	33.8	29.5	-	23.7	19.2	20.3	18.1	23.3	25.9	31.6	6.6	23.6	18.2	-	
B47	462019	451289	17.0	19.1	13.9	-	8.8	8.9	10.1	10.1	8.3	14.3	20.3		13.1	10.2	-	
B48	462122	451289	21.3	24.0	19.6	-	14.6	11.1	12.4	11.9	17.2	18.8	23.7	18.7	17.6	13.7	-	
B50	462291	451269	26.1	27.0	22.3	-	18.1	14.6	16.4	16.4	20.9	22.5	20.1	20.3	20.4	15.7	-	
B51	462384	451298	19.4	22.4	16.1	-	11.6	9.6	10.0	11.8	15.1	18.1	22.2	18.7	15.9	12.4	-	
B56	462888	451289	26.3	34.3	30.1	-	21.3	30.4	20.5	20.5	26.7	30.7	38.4	22.0	27.4	21.1	-	
B58	462970	451300	22.1	23.6	17.4	-	12.9	10.9	13.5	12.7	15.5	17.0	22.9	15.5	16.7	13.0	-	
B60	463234	451339	20.4	25.2	17.2	-	11.4	10.5	13.0	10.8	17.4	20.4	23.2	22.5	17.5	13.6	-	
B63	462704	451300	33.4	34.0	30.6	-	23.3	25.6	28.5	25.8	30.4	28.4	29.3	27.4	28.8	22.2	-	
B72	461122	451374	44.5	47.9	37.4	-	33.9	31.4	33.8	41.6	46.5	44.1			**40.1**	30.9	-	
B74	461371	452708		24.7	18.8	-	12.4	10.1	11.1	12.9	14.3	20.7	23.8	11.9	16.1	12.5	-	
B80	461185	452663	20.2	23.5	16.2	-	10.7	10.6	10.7	10.6	14.8	16.6	23.0	18.3	15.9	12.4	-	
B82	460974	452563	27.4	28.7	24.9	-	16.2	15.3	21.8	18.3	24.0	19.1	28.3	22.9	22.4	17.5	-	
B83	461285	452695	32.6	35.3	27.2	-	23.9	21.1	19.9	21.1	25.5	26.1	34.3	25.3	26.6	20.5	-	
B84	462654	451293	25.3	26.0	22.7	-	18.5	16.5	19.9	18.4	22.8	22.5	24.2	19.6	21.5	16.8	-	
B85	461227	451368	33.2	34.2	30.6	-	23.9	22.9	21.8	24.0	24.8	17.0	34.2	28.2	26.8	20.6	-	
B86	461116	452602	30.5	28.7	24.0	-	16.7	15.4	14.3	15.4	19.8	22.8	29.2	22.8	21.8	16.8	-	
B88	462799	451291	33.2	34.3	26.5	-	19.4	14.5	19.5	21.1	23.2	20.9	29.9	25.2	24.3	18.7	-	
B91	461143	451364	41.7	45.8	34.9	-	30.2		33.0	34.6	35.9	28.6	36.8	38.7	36.0	27.7	-	
B90	461133	451394	33.7	39.2	33.4	-	30.9	28.2	24.2	29.3	31.3	33.6	35.0	28.7	31.6	24.3	-	
C12	458825	449928	20.8	22.8	19.6	-	8.2	12.0	10.6	11.7	13.8	14.0	22.4	17.5	15.8	12.3	-	
C17	459085	450544	18.6	21.8	17.4	-	13.6	12.6	9.8	11.7	14.4	16.9	19.1	13.5	15.4	12.0	-	
C18	459204	450772	88.2	33.5	23.0	-	18.0	17.0	19.8	17.2	21.3	18.7	26.3	21.1	27.6	21.6	-	

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (B=0.78, R=0.77)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
C19	459271	450819	19.6	23.9	20.7	-	12.3	10.3	15.2	14.4	15.2	18.7	21.6	14.9	17.0	13.2	-	
C2	458333	448974	38.1	41.5	30.8	-	24.8	23.9		25.1	29.3	29.1	20.7	18.7	28.2	21.7	-	
C20	459280	450923	22.9	27.9	23.1	-	17.4	14.2	15.2	20.4	20.4	19.9	25.3	19.9	20.6	16.1	-	
C21	459410	451040	26.9	30.2	26.2	-	20.3	18.5	18.6	19.3	19.5	25.1	32.1	21.5	23.5	18.1	-	
C22	459570	451195	21.6	29.2	23.4	-	15.8	11.6	12.6	14.3	15.6	20.3	24.6	20.8	19.1	14.9	-	
C23	459553	451252	43.3	48.9	36.1	-	37.1	29.5	30.3	31.4	27.8	36.8	38.3	30.9	35.5	27.3	-	
C26	459639	451334	46.5	53.8	48.0	-	43.6	38.8	34.7	33.6	34.9	32.8	37.7	33.0	39.8	30.6	-	
C27	459717	451433	59.4	58.6	55.0	-	50.1	43.6	45.3	45.3	42.4	44.7	41.5	43.9	**48.2**	37.1	-	
C28	461201	448386	13.9	18.3	14.6	-	11.8	10.2	10.2	10.6	13.8	13.2	16.4	14.2	13.4	10.4	-	
C29	461196	448426	30.8	31.7	29.6	-	22.2	26.7	22.6	21.1	27.0	28.5	32.6	23.6	26.9	20.7	-	
C30	461185	448462	30.2	36.8	31.0	-	28.4		26.0	23.1	29.6	26.1	35.1	15.9	28.2	21.7	-	
C31	461193	448473	21.2	23.4	18.8	-	15.1	12.3	14.6	11.0	16.9	16.3	19.0	17.6	16.9	13.2	-	
C32	461128	448823	30.8	29.1	24.8	-	17.6	13.1	14.8	18.6	22.2	23.8	29.1	22.6	22.4	17.5	-	
C33	461085	448933		20.3	16.5	-	12.0	9.0	10.7	9.1	13.5	14.4	16.3	17.2	13.9	10.8	-	
C34	461085	449067	24.8	25.7	27.5	-	22.0		16.4	17.6	22.8	23.7	24.1	19.6	22.4	17.3	-	
C36	461052	449146	31.7	32.3	28.6	-	21.7	19.6	24.7	24.0	20.0	25.3	27.1	27.1	25.6	19.7	-	
C37	461045	449223	15.9	26.1	23.6	-	18.2	15.3	13.6	15.4	20.6	18.4	25.7	20.3	19.4	15.1	-	
C38	461038	449225	31.2	30.0	29.5	-	22.0	18.5	17.4	18.3	23.8	23.4	29.3	24.3	24.3	18.7	-	
C39	460974	449336	41.5	40.2	36.0	-	28.9	23.2		23.9	32.0	30.6	31.0	35.8	32.3	24.9	-	
C4	458470	449126	18.7	21.7	17.1	-	10.4	10.2	10.9	11.9	15.1	16.9	20.8	16.1	15.4	12.0	-	
C40	460910	449628	17.3	20.9	19.7	-		11.0	15.6	13.8	18.2	19.4	22.0	13.7	17.2	13.4	-	
C42	460857	449748	29.2	28.4	22.8	-	17.8	13.6	17.4	16.9	17.4	19.7	27.4	22.0	21.1	16.5	-	
C43	460869	449730	27.4	35.5	30.9	-	25.1	17.4	20.9	23.5	32.5	29.1	17.9	25.0	25.9	20.0	-	Part of triplicate set - see bottom of table for triplicate average
C43a	460869	449730	33.9	36.2	30.2	-	26.1	21.0	23.5	22.8	26.3	27.5	28.9	22.5	27.2	20.9	-	Part of triplicate set - see bottom of table for triplicate average
C44	460869	449730	31.0	36.6	28.7	-	26.4	20.0	20.5	23.9	27.0	23.7	22.1	26.8	26.1	20.1	-	Part of triplicate set - see bottom of table for triplicate average
C49	460860	450530	23.4	22.5	21.6	-	14.2	12.5	11.8	13.2	17.1	15.6	17.1	15.4	16.8	13.1	-	
C51	460871	450727		29.5	27.6	-	20.3	17.5	17.8	19.3	24.6		29.7		23.3	18.9	-	
C52	460853	450781	27.4	29.3	23.2	-	16.9	14.4	16.0	15.9	19.2	23.3	27.4	19.7	21.2	16.3	-	
C53	460766	450924	24.4	26.6	30.2	-									27.1	16.7	-	
C54	460762	451069	32.4	29.1	22.5	-	25.5	22.6	17.1	20.6	26.7	23.5	36.1	25.2	25.6	19.7	-	
C56	459484	451141	37.7	41.5	32.3	-	27.2	22.0	24.3	22.2	21.6		33.0	28.8	29.1	22.4	-	
C57	458912	450111	21.8	25.8	19.0	-	16.2	16.2	15.1	15.2	18.3	16.3	22.1	17.4	18.5	14.4	-	
C58	460926	449429	41.5	41.6	40.3	-	28.1	24.1	32.6	29.8	35.6	28.1	33.0	22.4	32.5	25.0	-	
C59	458735	449713	34.1	39.5	33.0	-	27.0	23.2	25.8	22.6	25.1	27.6	29.2	23.2	28.2	21.7	-	

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (B=0.78, R=0.77)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
C62	459579	451251	29.8	35.6	29.2	-	21.7	16.9	21.0	21.2	21.2	22.6	28.5	24.6	24.8	19.1	-	
C63	458790	449740	20.2	24.1	18.9	-	12.1	10.7	12.7	12.9	12.5	14.1	18.0	16.0	15.7	12.1	-	
C7	458611	449477	20.3	21.9	14.6	-	14.1	13.2	12.8	13.7	19.4	17.2	23.0	19.1	17.2	13.3	-	
D10	460443	451927	22.9	22.6	16.5	-	11.6	9.8	11.7	10.3	14.4	20.2	25.7	12.5	16.2	12.6	-	
D12	460567	451740	25.5	20.1	17.8	-	12.0	10.4	12.6	11.9	14.7	16.7	24.2	17.7	16.7	12.9	-	
D13	460271	451358	28.9	22.7	26.0	-	22.2	19.0	21.6	15.4	13.3	22.8	27.4	18.9	21.7	16.7	-	
D14	461077	451354	38.9	41.5	39.6	-	36.5	32.5	31.6	34.1	42.0	34.8	37.5		36.9	28.4	-	
D16	460708	451231	42.3	38.8	34.3	-	41.4	35.6	32.6	35.0	40.4	47.4	38.6	25.4	37.4	28.8	-	
D17	460575	451616	49.3	43.1	27.6	-		19.4	25.8	29.6	33.8	32.5	36.2	22.9	32.0	24.7	-	
D18	460395	451502		37.6	32.0	-	26.8	20.0	21.8	22.3	26.0		25.8	25.9	26.5	20.4	-	
D19	460038	451626	47.6	46.1	39.9	-	47.6	45.0	38.3	41.1	38.8	40.5	41.9	35.9	**42.1**	32.4	-	
D20	460323	451685	49.7	44.3	41.3	-	39.9	36.1	40.2		39.7	43.4	39.2	31.2	**40.5**	31.2	-	
D22	460035	452010			39.7	-	38.0		36.8	33.9	36.7	31.5	32.1		35.5	28.9	-	
D24	459805	451543	25.8	30.8	20.7	-	21.1	15.2	19.7	22.9	23.3	20.4	37.6	20.1	23.4	18.0	-	
D25	459693	451750	57.8	52.9	38.0	-	42.4	33.5	33.7	37.0	36.1	41.2	47.8	35.6	**41.5**	31.9	-	
D26	460671	451400	30.6	32.8	29.4	-	23.0	19.7	21.8	21.7	24.4	31.9	35.0	25.1	26.9	20.7	-	
D27	460734	451563	26.4	24.3	22.4	-	17.7	15.3	14.9	18.2	16.0	24.2	25.8	21.4	20.6	15.9	-	
D28	460764	451185	34.6	41.4	34.0	-	31.8	24.3	28.1	32.4	35.3	32.2	25.6	15.4	30.5	23.5	-	
D30	460834	451252	30.8	27.8	27.1	-	22.3	17.0	17.6	19.2	25.1	19.7	29.1	20.9	23.3	18.0	-	
D31	461002	451229	28.8	32.3	27.8	-	30.6	25.0	17.7	26.1	34.1	34.1	36.8	23.9	28.8	22.2	-	
D32	460258	451208	36.9	39.4	33.0	-	34.2	27.7	25.9	28.4	33.2	31.8	38.5	27.7	32.4	25.0	-	
D33	460075	451174	42.8	35.7	31.5	-	28.2	24.2	24.7	26.8	32.4	31.8	38.5		31.7	24.4	-	
D35	460134	451170	37.3	41.4	34.0	-	34.0	26.4	28.0	32.6	24.8	32.6	45.4	30.2	33.3	25.7	-	
D36	460135	450884	19.1	38.4	36.3	-	25.7	23.3	23.6	24.4	29.8	31.3	41.9	32.3	29.6	22.8	-	
D37	460157	450988	35.9	28.3	32.0	-	26.3		20.3	20.6	25.5	11.9	31.7	23.5	25.6	19.7	-	
D38	460088	450929	31.7	29.0	22.6	-	19.5	13.2	13.5	17.5	18.3	23.4	28.1	8.8	20.5	15.8	-	
D39	460185	451055	34.1	31.0	32.0	-	25.2	20.8	22.0	22.4	26.8	25.7	31.8	23.8	26.9	20.7	-	
D4	460560	452300	33.1	31.5	28.2	-	20.9	16.3	21.6	21.0	24.9	26.6	30.1	25.3	25.4	19.6	-	
D40	460069	451196	27.6	27.4	17.6	-	21.6	18.4	17.5	20.9	23.0	26.4	25.9	22.2	22.6	17.4	-	
D41	460286	452487	44.7	46.6	39.9	-		27.1	41.5	39.4	42.3	39.4	40.5	38.5	**40.0**	30.8	-	
D43	459920	451834	32.5	46.9	44.1	-	42.1	39.2	42.3	38.6	44.7	40.9	36.6	30.8	**39.9**	30.7	-	
D45	460673	451869	7.6	32.0	25.5	-	19.6	17.0	17.1	18.3	21.6	23.1	29.0	18.6	20.9	16.1	-	
D47	460682	452187	32.8	27.6	26.1	-	21.5	18.4	17.5	20.2	24.9	25.9	28.5		24.3	18.7	-	
D48	460103	452180	42.3	48.0	50.2	-	43.8	41.3	34.8	35.9		33.8	38.7	25.5	39.4	30.4	-	
D49	460656	451269	39.0	39.8	37.5	-	33.3	25.0	31.0	31.1	39.0	34.0	34.3	22.8	33.3	25.7	-	
D50	460371	451682	44.5	42.8		-	35.2	33.7	33.5	32.1	31.7	34.6	42.3	20.6	35.1	27.0	-	
D51	459640	451722	58.1	60.9	54.8	-	53.5	47.9	52.3	53.5	52.7	46.0	47.0	50.6	**52.5**	**40.4**	-	

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (B=0.78, R=0.77)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
D52	460887	451140	28.2	25.0	20.7	-	18.2	13.8	14.6	11.9	14.9	20.7	21.0	8.9	18.0	13.9	-	
D53	460115	451146	26.1	27.1	26.9	-	26.0	24.1	16.9	20.1	23.8	25.1	22.7	14.9	23.1	17.8	-	
D54	460146	451116	26.2	27.4	28.3	-	24.6	22.2	15.1	20.2	21.8	24.5	30.0	18.8	23.6	18.1	-	
D55	460087	452065	50.1	59.3	53.3	-	56.2	46.4	49.8	47.2	47.0	37.7	46.5	36.4	**48.2**	37.1	33.6	
D56	460400	451685	50.2	48.1	42.7	-	42.1		50.1	44.9	45.7	50.8	48.2	33.5	**45.6**	35.1	-	
D57	460416	451708	34.4	34.9	30.8	-	30.1	28.2		27.2	25.5	23.4	33.2	27.2	29.5	22.7	-	
D58	460435	451732	42.8	43.8	34.8	-	33.1	35.8	41.3	38.0	40.6	41.0	38.3	32.1	38.3	29.5	-	
D59	460087	452156	63.0	66.1	46.6	-	52.3	49.2	59.7	52.2	45.4	23.4	38.2	39.9	**48.7**	37.5	34.3	
D6	460570	452177	27.4	24.7	19.9	-	11.4	10.7	11.5	13.0	15.8	15.9	19.3	18.1	17.1	13.3	-	
D60	460294	451883	23.7	26.0	21.0	-	16.4	12.6	16.3	15.8	18.8	20.8	15.2	19.1	18.7	14.4	-	
D8	460553	451843	38.6	46.4	41.1	-	41.4	37.8	29.3	30.4		45.1	45.5		39.5	30.4	-	
D9	460483	452357	39.1	41.8	40.0	-	41.0	34.4	25.3		39.9	39.9	42.6	25.2	36.9	28.4	-	
8, 9, 9a	460163	452468	22.3	22.1	20.7	-	13.6	10.7	14.3	12.6	16.2	17.8	21.3	17.0	17.1	13.4	-	Triplicate Average for sites 8, 9 and 9a (Portland Street)
A13, A14, A14a	459335	452931	20.9	22.3	18.6	-	13.2	11.1	10.7	12.2	14.5	17.1	22.9	18.1	16.5	12.9	-	Triplicate Average for sites A13, A14 and A14a (Clifton Dale)
78, 79, 80	460149	452342	37.5	41.0		-	35.2	28.5	28.8	27.7	30.9	23.7	32.8	23.0	30.9	23.8	-	Triplicate Average for sites 78, 79 and 80 (Gillygate)
102, 103, 104	458703	452429	38.1	37.9	39.3	-	38.4	32.4	25.9	30.8	36.0	29.0	40.3	29.4	34.3	26.4	-	Triplicate Average for sites 102, 103 and 104 (Salisbury Terrace)
2a, 2b, 2c	460746	451034	23.2	25.9	25.3	-	19.4	18.4	15.9	20.0	22.7	23.4	29.5	19.8	22.1	17.1	-	Triplicate Average for sites 2a, 2b and 2c (Fishergate)
3a, 3b, 3c	460024	452767	18.3	21.8	18.1	-	10.4	8.6	11.1	10.5	14.7	16.1	15.1	16.6	14.7	11.4	-	Triplicate Average for sites 3a, 3b and 3c (Bootham)
95a, 95b, 95c	460938	449465	28.3	27.8	23.8	-	18.2	20.6	18.3	18.8	18.9	23.1		19.7	21.8	16.8	-	Triplicate Average for sites 95a, 95b and 95c (Fulford)
A19, A19a, A19b	458713	452414	36.3	32.9	30.9	-	24.6	21.3	24.9	24.5	29.4	29.7	34.4	24.4	28.5	21.9	-	Triplicate Average for sites A19, A19a and A19b (Salisbury Terrace)
A20, A20a, A20b	458760	452404	38.2	38.5	37.7	-	38.0	29.3	24.2	28.5	34.4	37.0	39.3	27.3	33.9	26.1	-	Triplicate Average for sites A20, A20a and A20b (Salisbury Terrace)
B36, B37, B37a	462565	454194	19.2	20.9	13.4	-	10.2	8.6	9.0	10.7	10.9	13.2	18.7	15.6	13.7	10.7	-	Triplicate Average for sites B36, B37 and B37a (Malton Road)
C43, C43a, C44	460869	449730	30.8	36.1	29.9	-	25.9	19.5	21.6	23.4	28.6	26.8	23.0	24.8	26.4	20.3	-	Triplicate Average for sites C43, C43a and C44 (Fulford Road)

☒ **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.TG22.**

☒ **Local bias adjustment factor used.**

☐ **National bias adjustment factor used.**

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

☒ **City of York Council confirm that all 2023 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 York During 2023

CYC regularly reviews planning applications with respect to potential air quality and other environmental impacts. The main sources identified include road traffic emissions associated with new developments. Developments are required to assess their impacts on air quality where necessary in line with CYC's Low Emission Planning Guidance.

The table below provides an overview of planning applications (including discharge of condition applications) that have been considered in relation to air quality by CYC's Public Protection team during 2023. A formal air quality impact assessment has been requested for some of these applications.

The Annual Status Report provides an opportunity to keep a record of such applications to provide a picture of where changes in air quality may occur in the future. The information presented is also useful to identify where combined impacts of several developments may become important. It should be noted that electric vehicle (EV) recharging was requested for a large number of applications in 2023 and as such not all of these have been referenced below.

Comments on all planning applications processed by CYC are available by searching the planning reference number at Search Planning Applications received by City of York Council.

Planning Reference	Description
AOD/22/00420	Condition 6 (EV charging) of 22/00542/FUL. The Clock Tower Bishopthorpe Road York
23/00004/FUL	Installation of replacement biomass boiler (retrospective). Vertigrow Garden Centre, Lawnswood House, Malton Road, Stockton On The Forest, York, YO32 9TL
23/00157/FUL	Use of land as temporary car park at Bootham Park Court (retrospective in part). York District Hospital, Wigginton Road, York, YO31 8HE

Planning Reference	Description
23/00160/OUTM	Outline application with all matters reserved except for access for circa 800 dwellings, provision of open space, flood storage measures, landscaping and associated infrastructure. Land To The South Of Rose Cottage Farm And The Lodge, Moor Lane, Haxby, York
AOD/23/00038	Condition 5 (EV charging) of 22/01691/FUL.
AOD/23/00073	Condition 13 (EV charging) of planning permission 22/02433/FUL. Fulford School, Fulfordgate, York, YO10 4FY
AOD/23/00105	Condition 32 of 20/01546/FUL. North Selby Mine, New Road, Deighton, York, YO19 6EZ
23/00633/FUL	Variation of condition 1 of permitted application 22/00542/FUL to alter car parking allocation. The Clock Tower, Bishopthorpe Road, York
23/00644/FUL	Reconfiguration of car parking area serving Clifton House. Clifton House, Bluebeck Drive, York, YO30 5RA
23/00391/FUL	Erection of 4no. dwellings with associated access, parking and landscaping following demolition of existing commercial buildings. Moor Lane Construction Unit, 1 Moor Lane, Bishopthorpe, York, YO23 2UF
23/00608/FULM	Erection of extra care accommodation including no.72 apartments and decked car park. Chocolate Works Residents Parking, Bishopthorpe Road, York
AOD/23/00127	Condition 6 (EV charging strategy) of 22/01288/FUL. York Pullman Bus Company Ltd, Rawcliffe Depot, Shipton Road, Rawcliffe, York, YO30 5YA
23/00742/FUL	One and two storey side extension, external alterations to existing building and creation of additional car and cycle parking provision. Poppleton Community Centre, Main Street, Upper Poppleton, York, YO26 6JT
AOD/23/00147	Condition 25 (EV charging strategy) of 21/01371/FULM. Land At Cocoa West, Wigginton Road, York

Planning Reference	Description
AOD/23/00176	Condition 3 (EV charging) of planning permission 21/02601/FULM. Former Storage Facility Site Derwent Valley Industrial Estate, Dunnington, York
AOD/23/00267	Condition 19 (EV charging) of 18/02744/OUTM. Lindum Business Park, York Road, Elvington, York
23/01494/REMM	Reserved matters approval for layout, scale, appearance, landscaping and access for the creation of a new public realm with associated infrastructure and landscaping and alterations to the existing road network pursuant to outline planning permission 18/01884/OUTM. York Central, Leeman Road, York
AOD/23/00268	Condition 10 (EV charging) of 22/02012/FULM. Abracs, George Cayley Drive, York, YO30 4XE
AOD/23/00295	Condition 8 (EV charging) of 20/00940/FULM. Premier Inn, Layerthorpe York YO31 7YW
AOD/23/00294	Condition 9 (EV charging) of 21/02220/FULM. Marrtree Business Park, Stirling Road, York
AOD/23/00306	Condition 4 (EV charging) of 20/02012/FUL. Ryburn Dene, Grosvenor Road, York, YO30 7AN
AOD/23/00357	Condition 23 (EV charging) of 20/02087/FUL. Former 86 Heworth, York, YO31 1AP
AOD/23/00355	Conditions 12 (EV charging) of 20/02034/FULM. Luna, Fifth Avenue, York
AOD/23/00354	Condition 24 (EV charging) of 22/00015/FULM. J H Shouksmith And Sons Ltd, Murton Way, York, YO19 5GS
23/02200/FULM	Erection of food store and drive-thru restaurant both with associated access, parking and landscaping. T.K.Maxx, Unit 2 Monks Cross Drive, Huntington, York, YO32 9GX
22/02020/FULM	Improvements to the A1237 York Outer Ring Road including dualling of existing carriageway, improvements to roundabouts, provision of 5.1km shared use cycle and pedestrian route, signalised crossing facilities for active travel users, 2no. overbridges and no.6 underpasses for pedestrians and cyclists with ancillary development including sustainable drainage

Planning Reference	Description
	measures, flood compensatory storage areas, woodland planting/landscaping, habitat creation, noise barriers, revised field accesses, associated infrastructure and earthworks

Additional Air Quality Works Undertaken by City of York Council During 2023

Additional work carried out in 2023 to support the development of AQAP measures includes:

- **'Fuel for Thought' Campaign** – we carried out research and insights into key target audience personas in York to inform the DEFRA funded solid fuel burning campaign. A pre-campaign awareness survey, issued via CYC Business Intelligence, ran for 3 weeks in August 2023. In addition, three public focus groups were progressed at CYC Library Venues across York. A summary of this research and a selection of materials developed for the final 'Fuel for Thought' campaign has already been shared with DEFRA as part of the AQ Grant quarterly update reports.
- **York Air Alert** - We progressed research and development into CYC's new DEFRA funded Air Quality Forecasting and Alert Platform, York Air Alert. The platform can be used by residents and visitors (especially those with health conditions exacerbated by air pollution) to make informed decisions with respect to travel around the city to help reduce their own exposure to air pollution.
- **Smoke Control Areas** – we undertook further research in CYC's historical Smoke Control Orders, collating the required evidence base, and consulted with CYC Legal Services and DEFRA about potential expansion of CYC Smoke Control Area to cover the whole of CYC's administrative area. It is anticipated that this project will progress in 2024; further details are provided in AQAP4.
- **Gillygate Air Quality Working Group** - An officer working group was established in August 2023 to consider specific air quality improvement measures on Gillygate in response to continued exceedances of health-based standards. This group met monthly from Aug 2023 and has also met regularly with local residents since this time to further understand the local perspective and to jointly develop measures to address ongoing traffic and air quality issues.

- **AQAP4 Consultation** – we consulted with the public and other groups to gather feedback specifically on air quality in York and on measures to improve air quality proposed in our updated Air Quality Action Plan (AQAP4).

QA/QC of Diffusion Tube Monitoring

Diffusion tubes used by CYC in 2023 were supplied and analysed by SOCOTEC (Didcot), Unit 12 Moorbrook, Southmead Industrial Park, Didcot, Oxfordshire, OX11 7HP. The preparation method used for the diffusion tubes was 50% TEA in Acetone.

Diffusion tube monitoring was completed in line with the 2023 Diffusion Tube Monitoring Calendar as available on DEFRA's LAQM webpage.

AIR is an independent analytical proficiency-testing (PT) scheme, operated by LGC Standards and supported by the Health and Safety Laboratory (HSL). AIR PT is a new scheme, started in April 2014, which combines two long running PT schemes: LGC Standards STACKS PT scheme and HSL WASP PT scheme. AIR offers a number of test samples designed to test the proficiency of laboratories undertaking analysis of chemical pollutants in ambient indoor, stack and workplace air. For the 2023 period, the percentage of results submitted by SOCTEC that were deemed to be satisfactory was 100% for all rounds reported at the time of writing (rounds AR055 [Jan – Feb 2023], AR056 [May – June 2023], AR058 [July – Aug 2023] and AR059 [Sept – Oct 2023]). Further information about this scheme is available on the DEFRA webpage.

Removal of April 2023 diffusion tube data

Following a mid-year review of CYC's 2023 diffusion tube dataset it was noticed that many of the April 2023 results appeared much lower than expected (compared with months either side and compared with April in previous years). CYC raised this with the supplying laboratory who were unable to offer a satisfactory explanation.

Upon further investigation it was also revealed that other local authorities who used the same laboratory had also noticed anomalous data for April 2023. Following advice received from the LAQM Helpdesk on 26th Sept 2023 (query reference 8960), a decision was taken to exclude all April 2023 results from the final data. This was considered the most open and transparent way to handle the anomalous data and was considered to reflect a worst case based on the following:

- The bias corrected annual mean for 221 of 232 tubes (excluding blank) increased (with April data removed)

- The bias corrected annual mean for 4 of 232 tubes remained unchanged (with April data removed)
- Of the remaining 7 tubes, the bias corrected annual means with and without April removed, were all within 0.3µg/m^3 with the exception of one tube (C26) that was 0.8µg/m^3. Across these 7 tubes the maximum bias corrected mean was 31µg/m^3 (well within the annual mean NO_2 objective).

Diffusion Tube Annualisation

Annualisation is required for any diffusion tube monitoring site with data capture less than 75% but greater than 25%. The process of annualisation scales the available monitoring data to provide an estimate of the annual mean nitrogen dioxide concentration. This can then be compared with health-based Air Quality Objectives.

CYC undertook background diffusion tube monitoring of nitrogen dioxide at a number of background locations during 2023. Of these sites, 53 diffusion tubes had 11 months data available (i.e. a full year's worth of data, excluding April as described above) and have been used to derive the period to annual ratios required for the annualisation. This methodology has previously been agreed with the LAQM Helpdesk and is in line with the methodology used in all CYC's previous Annual Status Reports. The following steps were used:

- **Step 1** - Calculate the period mean for the diffusion tube sample requiring annualisation
- **Step 2** - Calculate the corresponding period means and annual means for each of the 53 background diffusion tube locations. Use these two figures to calculate the period mean to annual mean ratio for each of the 53 background diffusion tube sites.
- **Step 3** – Calculate the average ratio across the 53 background monitoring sites (i.e. n = 53)
- **Step 4** – Use the ratio in Step 3 to adjust the period mean (Step 1) to provide an estimate of the annual diffusion tube mean (non-bias adjusted)
- **Step 5** – Bias correct the value calculated in step 4 using the appropriate bias correction factor.

Seven diffusion tube sites required annualisation, namely 14, 111, 130, A54, C51, C53 and D22. The calculations and annualisation factors are provided in Table C.1. All

annualised diffusion tube results are below the annual mean objective for nitrogen dioxide (note that site 14 is broadly equal to the objective at 39.9µg/m^3).

Table C.1 – Annualisation Summary (concentrations presented in µg/m^3)

Site ID	Average Annualisation Factor	Raw Data Annual Mean (µg/m^3)	Annualised Annual Mean (µg/m^3)	Bias Corrected Annualised Annual Mean (µg/m^3)
14	0.976	53.2	51.9	39.9
111	1.027	24.8	25.4	19.6
130	0.889	14.3	12.7	9.8
A54	1.069	34.6	37.0	28.5
C51	1.051	23.3	24.5	18.9
C53	0.802	27.1	21.7	16.7
D22	1.057	35.5	37.6	28.9

Diffusion Tube Bias Adjustment Factors

The diffusion tube data presented within the 2023 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.TG22 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.

CYC have applied local roadside and background bias adjustment factors of 0.77 and 0.78 respectively to the 2023 monitoring data. A summary of bias adjustment factors used by CYC over the past five years is presented in Table C.2.

For the purposes of this ASR, local bias adjustment factors have been calculated for diffusion tubes located at roadside and urban background locations separately. This is in line with the approach used by CYC for the last 15+ years and in line with advice from the LAQM Helpdesk obtained in previous reporting years. AEA's Precision and Accuracy spreadsheet has been used to consider co-location studies at 3 York roadside locations (Fishergate, Gillygate and Fulford Road) and one York urban-background location (Bootham).

Roadside bias adjustment factor

Data capture and tube precision for 2023 was shown to be ‘good’ at all 3 roadside sites and the resultant combined/average bias factor across the 3 sites (following methodology in TG22 para 7.222) was 0.77. This factor has been used to correct diffusion tube results at roadside locations in 2023. The methodology used to derive the combined factor was:

- Step 1 - Average of Bias Factor B’s = (30+30+30)/3 = 30
- Step 2 - Express as a factor = 0.3
- Step 3 - Add 1 to this value = 0.3 + 1 = 1.3
- Step 4 - Take the inverse to give the bias adjustment factor = 1/1.3 = 0.77

Urban background bias adjustment factor

Data capture and tube precision for 2023 was shown to be ‘good’ at the Bootham urban background site. The bias factor for this site was calculated to be 0.78. This factor has been used to correct diffusion tube results at urban background locations in 2023.

Comparison with national bias adjustment factor

The overall 2023 bias correction factor from the national diffusion tube bias adjustment factor spreadsheet for SOCOTEC Didcot [preparation method 50% TEA in acetone] from 28 studies was 0.77. This is the suggested figure to use for all site types in the absence of any local collocation data. It was considered that the locally derived bias correction factors were comparable to this national figure. Historically, locally derived bias correction factors have always used for the correction of CYC’s diffusion tube data and the local figures have therefore been used for correction of tube data presented in this report. Local bias factors in 2023 are also comparable to factors calculated for previous years and reported in historical Annual Status Reports, shown in Table C.2.

As CYC’s locally derived bias factors of 0.77 (roadside) / 0.78 (background) are equal to or above the national factor of 0.77, this also represents a robust, worse case approach for adjustment of CYC’s diffusion tube data.

Table C.2 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2023	Local	-	Background tubes 0.78 Roadside tubes 0.77
2022	Local	-	Background tubes 0.73 Roadside tubes 0.73
2021	Local	-	Background tubes 0.72 Roadside tubes 0.75
2020	Local	-	Background tubes 0.68 Roadside tubes 0.74
2019	Local	-	Background tubes 0.76 Roadside tubes 0.74

Table C.3 – Local Bias Adjustment Calculation

	Local Bias Adjustment Input 1 – Bootham (Urban Background)	Local Bias Adjustment Input 2 – Fishergate (Roadside)	Local Bias Adjustment Input 3 – Gillygate (Roadside)	Local Bias Adjustment Input 4 – Fulford (Roadside)
Periods used to calculate bias	9	10	9	8
Bias Factor A	0.78 (0.75 – 0.8)	0.77 (0.72 – 0.82)	0.77 (0.68 – 0.88)	0.77 (0.74 – 0.8)
Bias Factor B	29% (25% - 33%)	30% (21% - 38%)	30% (13% - 47%)	30% (25% - 36%)
Diffusion Tube Mean (µg/m^3)	14	22	32	22
Mean CV (Precision)	5	8	4	5
Automatic Mean (µg/m^3)	11	17	24	17
Data Capture	99%	98%	98%	99%
Adjusted Tube Mean (µg/m^3)	11 (11 – 11)	17 (16 – 18)	24 (22 – 28)	17 (16 – 18)

Notes:

A single local bias adjustment factor of 0.78 has been used to bias adjust the 2023 diffusion tube results at urban background locations.

A combined local bias adjustment factor of 0.77 has been used to bias adjust the 2023 diffusion tube results at roadside locations.

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.

Distance correction has been considered at monitoring sites where the annual mean concentration is greater than 36µg/m^3 and the monitoring site is not located at a point of relevant exposure (taking the limitations of the calculator into account). In 2023, 10 diffusion monitoring sites recorded bias corrected annual mean concentrations in excess of 36µg/m^3, namely site references 7, 13, 14, 109, 115, A1, C27, D51, D55 and D59. Further commentary on each of these sites us provided in Table C.4.

Table C.4 – Non-Automatic 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
7	0.3	2.6	41.7	13.0	31.6	See calculation to left. Site located within current AQMA
13	1.5	1.6	39.8	-	-	Location considered relevant without correction as mounted on a drainpipe attached to facade of building. Site located within current AQMA
14	2.3	2.5	39.9	-	-	Location considered relevant without correction as mounted on a drainpipe attached to facade of building. Site located within current AQMA
109	2.5	2.7	36.6	-	-	Location considered relevant without correction as mounted on a drainpipe attached

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
						to facade of building. Site located within current AQMA
115	1.5	N/A	45.0	-	-	Not relevant location with respect to annual mean as located at a bus stop. Only relevant with respect to hourly NO_2 objective, but currently under 60µg/m^3 so not of concern. Nevertheless, site located within current wider AQMA
A1	2.3	2.5	42.6	-	-	Location considered relevant without correction as mounted on a drainpipe attached to facade of building. Site located within current AQMA
C27	3.2	3.4	37.1	-	-	Location considered relevant without correction as mounted on a drainpipe attached to facade of building. Site located within current AQMA
D51	N/A	N/A	40.4	-	-	Not relevant location with respect to annual mean as located at taxi rank, within railway station portico. Only potentially relevant with respect to hourly NO_2 objective, but currently under 60µg/m^3 so not of concern.
D55	2.2	4.0	37.1	13.0	33.6	See calculation to left. Site located within current AQMA

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
D59	2.7	4.5	37.5	13.0	34.3	See calculation to left. Site located within current AQMA

QA/QC of Automatic Monitoring

To ensure that the air quality data collected by CYC fully complies with the requirements of the Review and Assessment process, a comprehensive set of QA/QC procedures are in place. The aims of the QA/QC programme were fully detailed in 'Technical Annex 2: Air Pollution Monitoring in York' which was submitted with the Second and Third Stage Review and Assessment of Air Quality in York.

All roadside automatic monitoring sites are calibrated fortnightly by CYC's Public Protection Team. The Bootham urban background monitoring site is calibrated 4-weekly in line with AURN requirements. Sites are serviced by the equipment suppliers every 6 months and independently audited every 12 months. The annual audit also provides an independent check of site cylinder concentrations against reference standards. The latest round of station audits was carried out in January 2024 by Ricardo-AEA.

CYC's continuous monitoring sites are currently serviced and maintained by 'Matt's Monitors'. Data management is currently undertaken by Ricardo-AEA with all results being published to the Air Quality England website. This website displays live and historical data for all automatic monitoring sites in York. All data presented in this ASR is fully ratified.

PM_{10} and $PM_{2.5}$ Monitoring Adjustment

For Holgate Road and Plantation Drive TEOM (PM_{10}) data in 2023 a correction factor of 1.3 has been applied (INDIC.GRAV) due to lack of nearby TEOM-FDMS data for VCM correction.

Gillygate $PM_{2.5}$ data was collected as uncorrected TEOM data between 1st Jan 2023 – 1st Aug 2023 (as the VCM is not considered appropriate for correction of $PM_{2.5}$ data). The $PM_{2.5}$ monitor at Gillygate was upgraded in August 2023 to TEOM-FDMS (equivalent to the reference method without correction). Annual averages presented in this report for Gillygate $PM_{2.5}$ utilise both data sets.

Holgate $PM_{2.5}$ data was collected as TEOM-FDMS from 11th July 2023. This was a new monitor to replace the previous TEOM (PM_{10}).

No correction factors have been applied to the BAM data presented in this report (Bootham and Fishergate) as this is this monitoring method provides reference method equivalent data.

Automatic Monitoring Annualisation

In 2023, data capture for Holgate Road for automatic monitoring of PM_{10} and $PM_{2.5}$ was less than 75% (due to the PM_{10} analyser being upgraded to a $PM_{2.5}$ analyser mid-year). Data capture rates for PM_{10} and $PM_{2.5}$ were 50.4% and 45.0% respectively.

Annualisation for PM_{10} and $PM_{2.5}$ has been carried out in line with LAQM.TG22 and is summarised below. In summary, three nearby AURN background sites measuring the required pollutants and with the necessary data capture were available to derive an average annualisation factor.

Site ID	Annualisation Factor – York Bootham	Annualisation Factor – High Muffles	Annualisation Factor – Leeds Centre	Average Annualisation Factor	Raw Data Annual Mean (µg/m^3)	Annualised Annual Mean (µg/m^3)
Holgate PM_{10}	0.997	0.867	0.913	0.926	18.1	16.8
Holgate $PM_{2.5}$	1.115	1.356	1.164	1.211	6.4	7.8

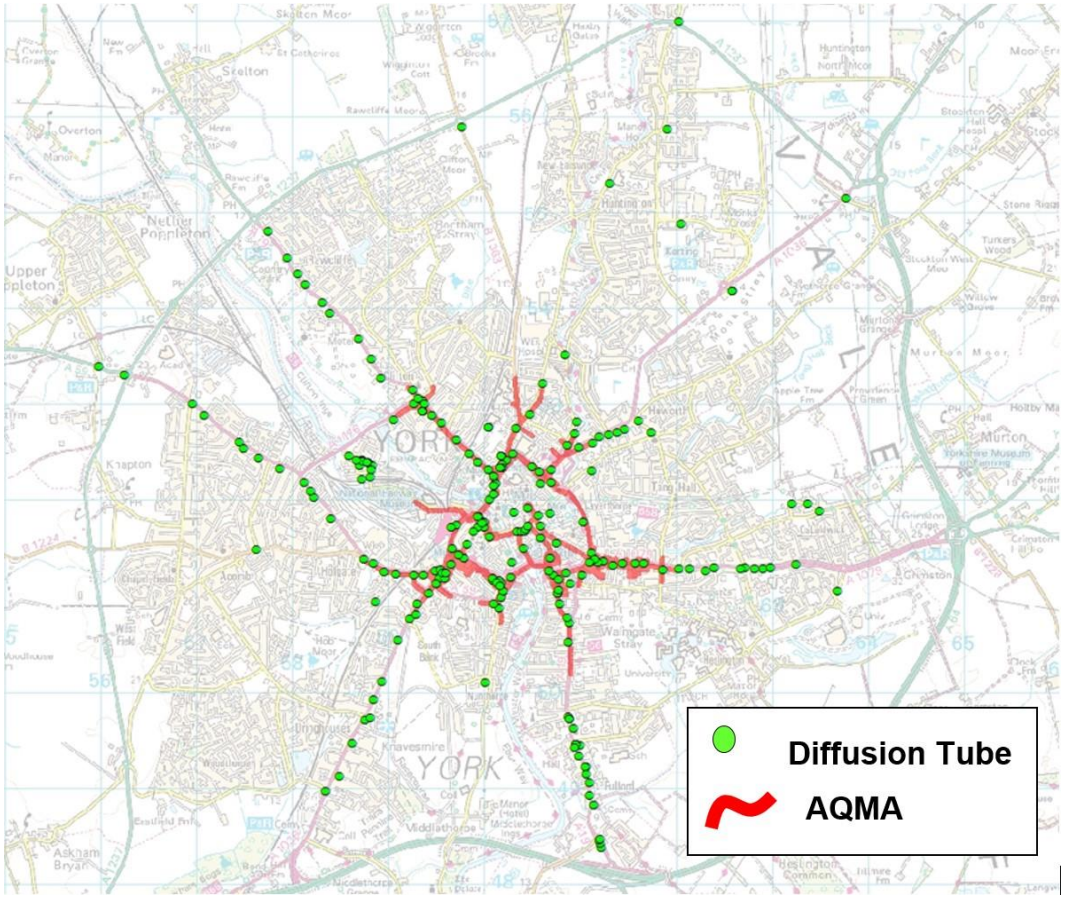
NO_2 Fall-off with Distance from the Road

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 NO_2 fall-off with distance calculator available on the LAQM Support website. Where appropriate, automatic annual mean NO_2 concentrations corrected for distance are presented in Table A.3. No automatic NO_2 monitoring locations within CYC's area required distance correction during 2023.

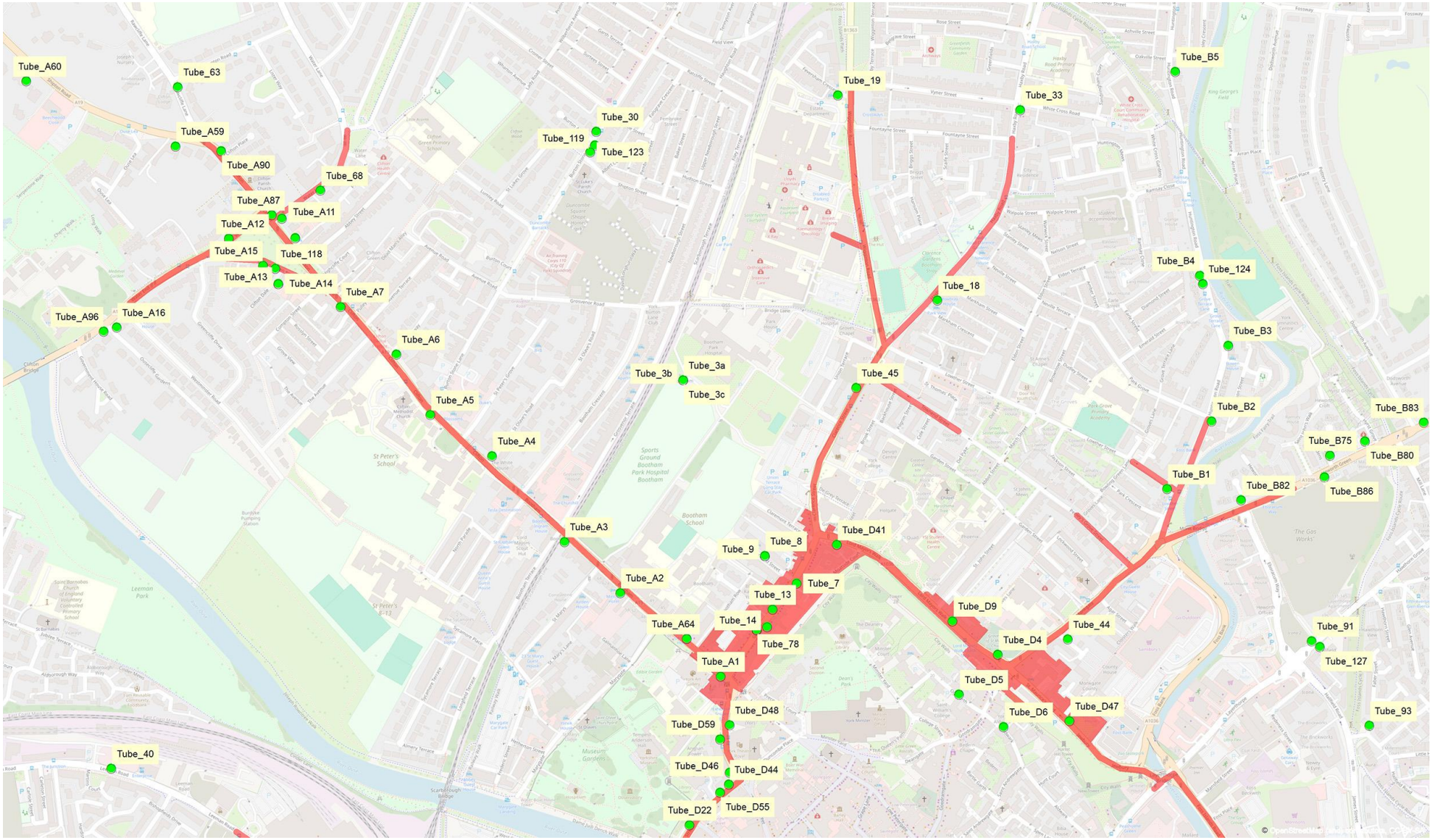
Appendix D: Map(s) of Monitoring Locations and AQMAs

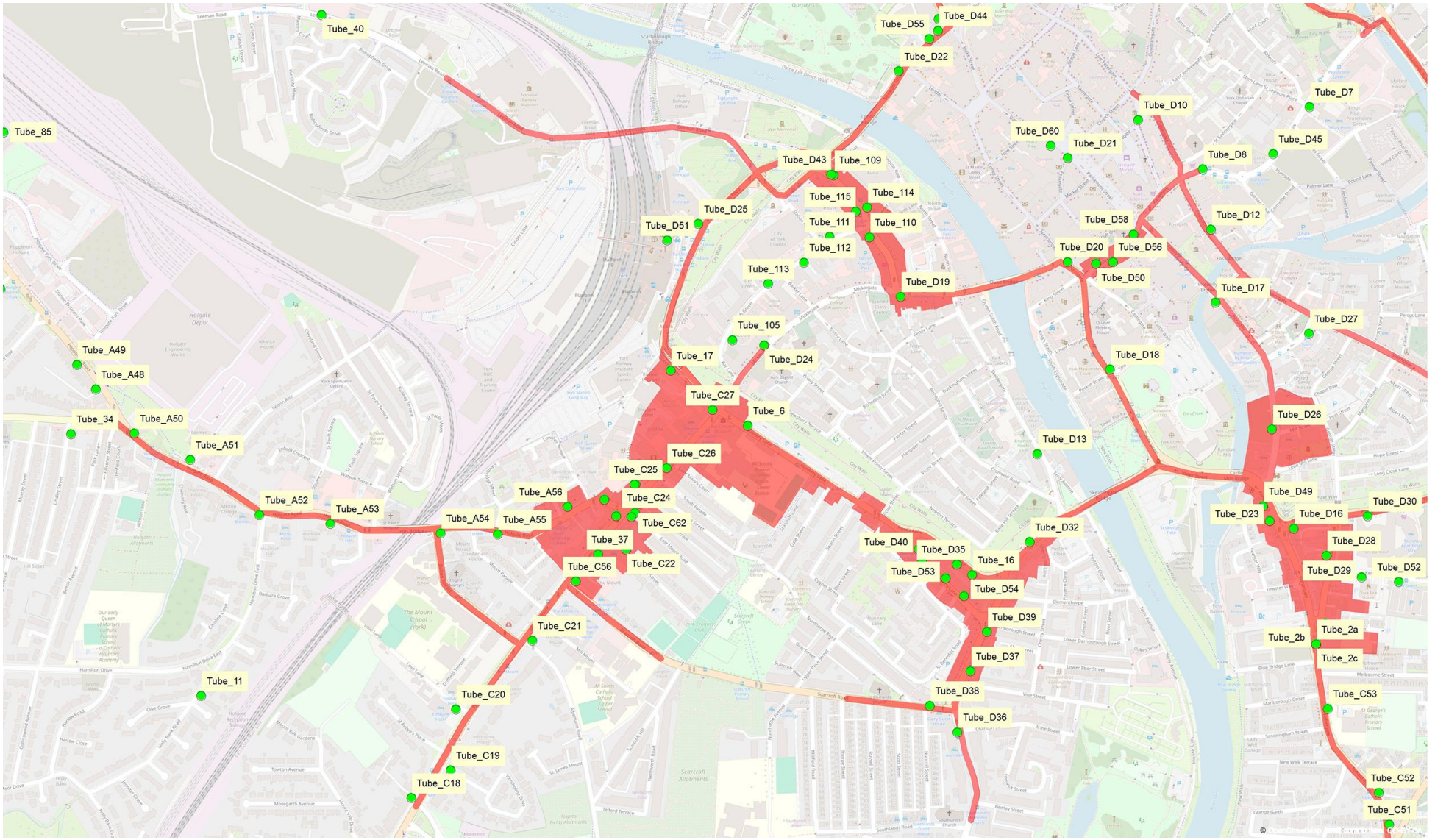
Figure D.1 – Map of Non-Automatic Monitoring Site

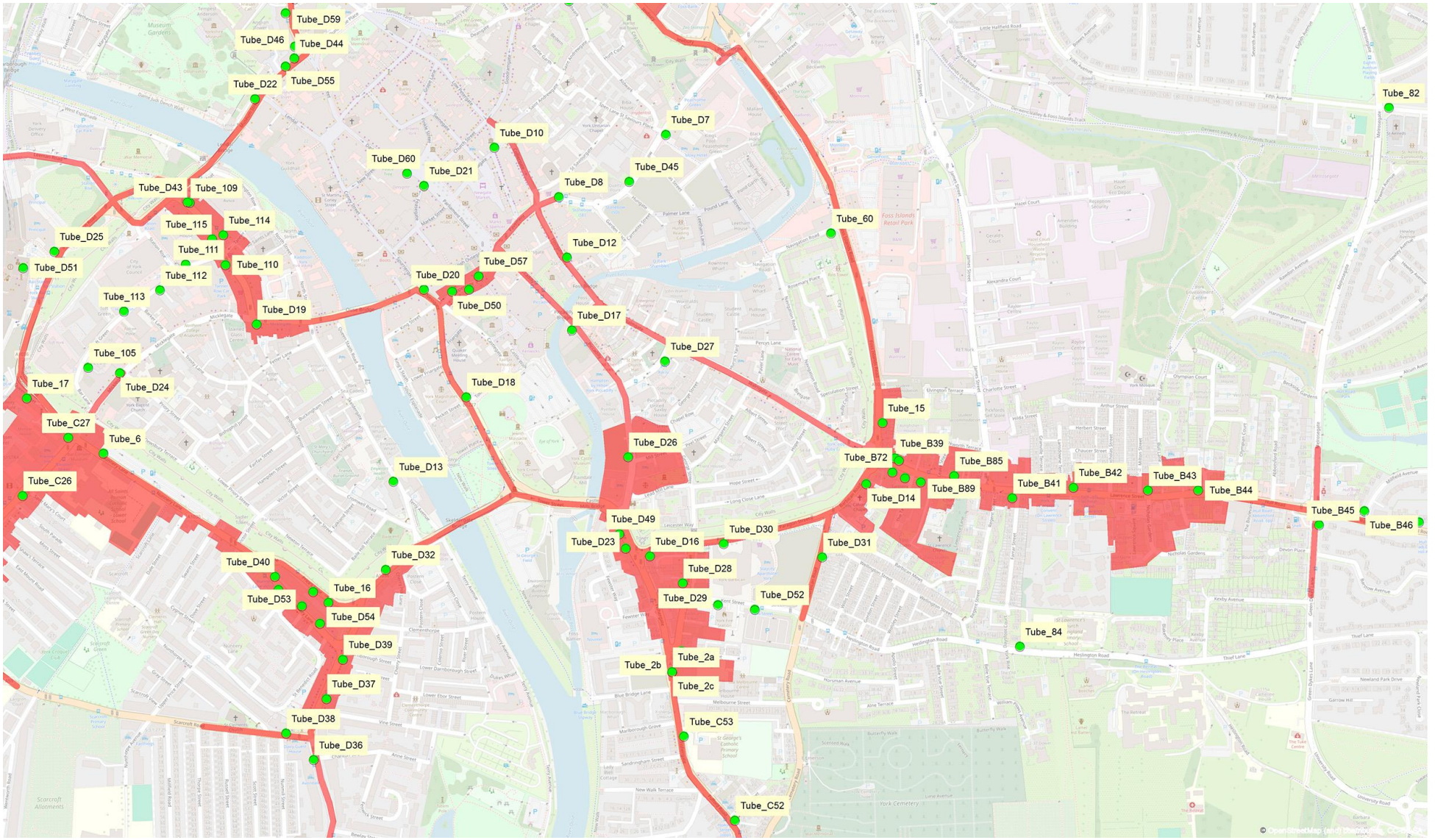
Due to the number of tubes operated by City of York Council, an interactive diffusion tube map showing tube reference numbers has been made available online to accompany the 2024 ASR. View interactive diffusion tube map here. Expanded views showing diffusion tube locations across all areas of the AQMA are shown on the following pages.



Expanded views of diffusion tube locations in relation to the AQMA boundary:




Tube_40
Tube_85
Tube_55
Tube_44
Tube_22
Tube_D7
Tube_D10
Tube_D60
Tube_D21
Tube_D45
Tube_D8
Tube_43
Tube_109
Tube_115
Tube_114
Tube_D25
Tube_D12
Tube_D58
Tube_D51
Tube_111
Tube_110
Tube_112
Tube_D20
Tube_D56
Tube_113
Tube_D50
Tube_D19
Tube_D17
Tube_D27
Tube_105
Tube_A49
Tube_17
Tube_D24
Tube_D18
Tube_A48
Tube_C27
Tube_6
Tube_D26
Tube_34
Tube_A50
Tube_A51
Tube_D13
Tube_C26
Tube_C25
Tube_A52
Tube_A56
Tube_C24
Tube_D49
Tube_D30
Tube_A53
Tube_A54
Tube_A55
Tube_C62
Tube_D23
Tube_D16
Tube_D32
Tube_37
Tube_D40
Tube_D35
Tube_16
Tube_D28
Tube_C56
Tube_C22
Tube_D53
Tube_D29
Tube_D52
Tube_D54
Tube_C21
Tube_D39
Tube_2a
Tube_2b
Tube_D37
Tube_2c
Tube_11
Tube_C20
Tube_D38
Tube_C53
Tube_D36
Tube_C19
Tube_C18
Tube_C52
Tube_C51


Tube_D59
Tube_D46
Tube_D44
Tube_D22
Tube_D55
Tube_D10
Tube_D7
Tube_D60
Tube_D21
Tube_D45
Tube_D8
Tube_D43
Tube_109
Tube_115
Tube_114
Tube_D25
Tube_111
Tube_D12
Tube_D51
Tube_110
Tube_D57
Tube_112
Tube_D20
Tube_113
Tube_D50
Tube_D19
Tube_D17
Tube_105
Tube_D27
Tube_17
Tube_D24
Tube_D18
Tube_C27
Tube_6
Tube_D26
Tube_D13
Tube_C26
Tube_D49
Tube_D23
Tube_D16
Tube_D30
Tube_D32
Tube_D40
Tube_D28
Tube_16
Tube_D53
Tube_D29
Tube_D54
Tube_D39
Tube_D37
Tube_2b
Tube_2a
Tube_2c
Tube_D38
Tube_C53
Tube_D36
Tube_C52
Tube_82
Tube_60
Tube_15
Tube_B39
Tube_B72
Tube_B85
Tube_B42
Tube_B43
Tube_B89
Tube_B41
Tube_B44
Tube_D14
Tube_D31
Tube_B45
Tube_B46
Tube_D52
Tube_84

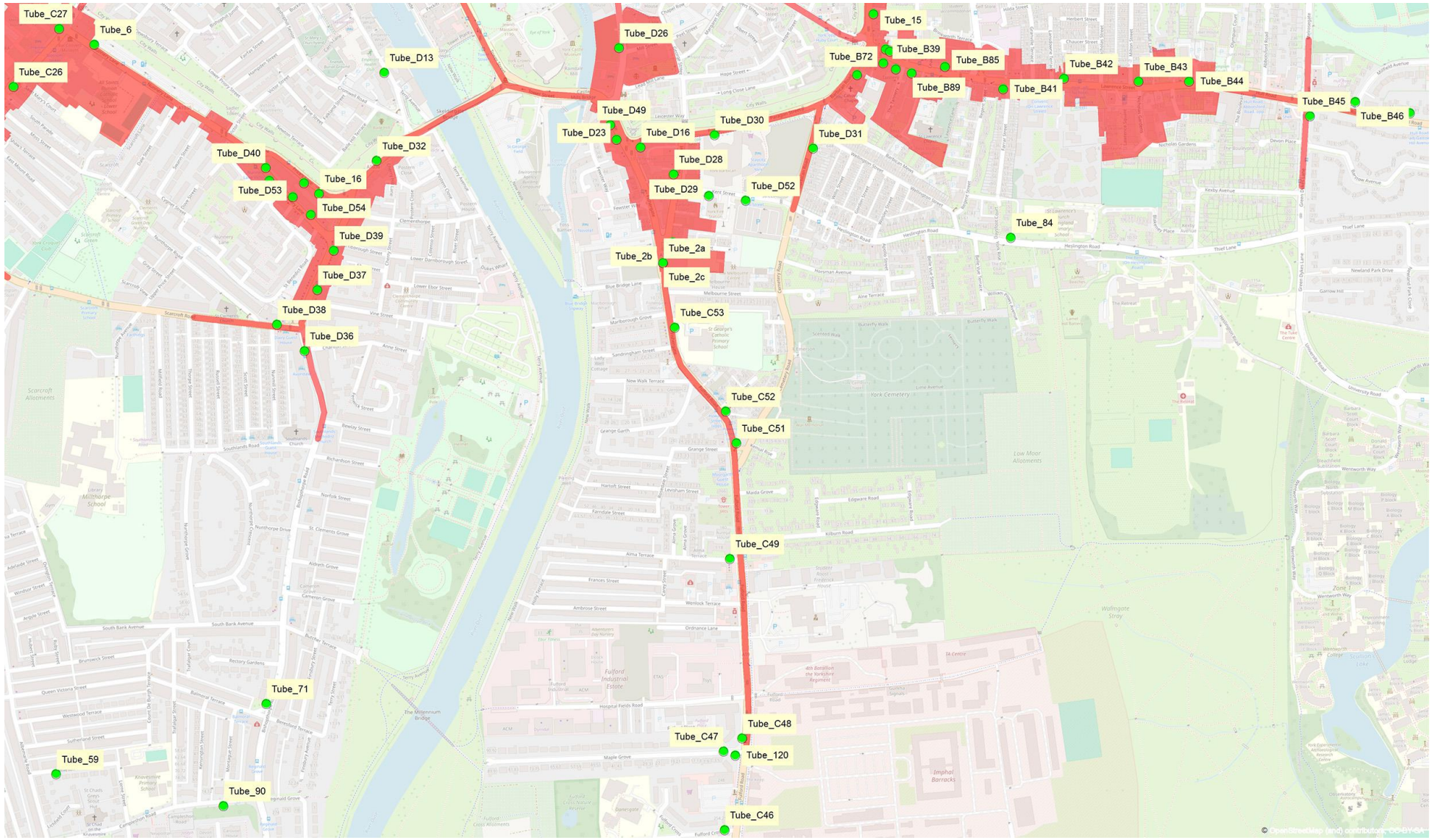
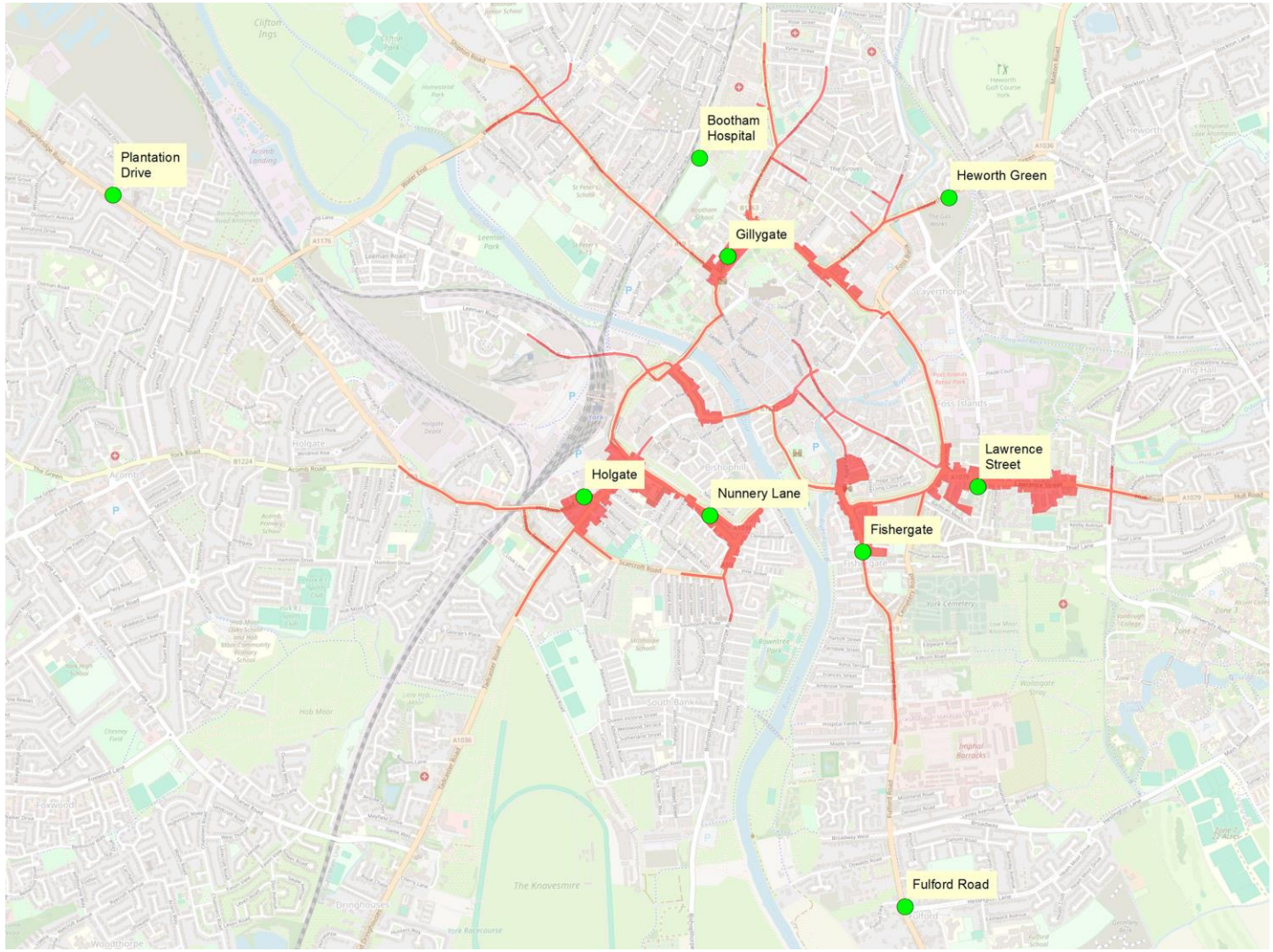

Tube_C27
Tube_6
Tube_C26
Tube_D13
Tube_D26
Tube_15
Tube_B39
Tube_B72
Tube_B85
Tube_B42
Tube_B43
Tube_B44
Tube_B89
Tube_B41
Tube_B45
Tube_B46
Tube_D49
Tube_D23
Tube_D16
Tube_D30
Tube_D31
Tube_D32
Tube_D40
Tube_D28
Tube_16
Tube_D53
Tube_D29
Tube_D52
Tube_D54
Tube_84
Tube_D39
Tube_2b
Tube_2a
Tube_D37
Tube_2c
Tube_D38
Tube_C53
Tube_D36
Tube_C52
Tube_C51
Tube_C49
Tube_71
Tube_C48
Tube_C47
Tube_59
Tube_120
Tube_90
Tube_C46

Figure D.2 - Map of Automatic Monitoring Sites in relation to AQMA

Air Quality Management Area (AQMA) shown in red. Precise locations of automatic monitors are shown online at the Air Quality England website.



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.TG22. August 2022. 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.PG22. August 2022. Published by DEFRA in partnership with the Scottish Government, Welsh Assembly Government and Department of the Environment Northern Ireland.
- Chemical hazards and poisons report: Issue 28. June 2022. Published by UK Health Security Agency
- Air Quality Strategy – Framework for Local Authority Delivery. August 2023. Published by DEFRA.
- City of York Council's previous LAQM Review and Assessment reports can be found on City of York Council's website