2024 Air Quality Status Report (ASR)

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

June 2024
Version 2

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Executive Summary: Air Quality in our Area

Air Quality in Milton Keynes

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].

In Milton Keynes City Council (a unitary authority) air quality is managed jointly by Environmental Health, Transport Policy, Development Control, Public Health and Sustainability Departments. The Council also works in partnership with other local authorities, with the Environment Agency (East of England Region), and attends Herts, Beds and Neighbouring Authorities Air Quality Forum.

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.

[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

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.

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[3] 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[4] 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[5] 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.

Local Cycling and Walking Infrastructure Plan

In January 2023 Milton Keynes City Council published its first Local Cycling and Walking Infrastructure Plan, which sets out ambitious plans, including many suggested by local people, to expand and upgrade the city's Redway network and thus help more people choose walking, cycling and scooting as their first choice for shorter trips.

To develop the long-term Plan, the City Council asked local residents and groups what kind of improvements would be most useful. In total almost 300 locations around Central MK, Bletchley, Wolverton, Stony Stratford, Newport Pagnell and Olney have been identified. Improvements fall under three main themes:

- Missing links where a new section of Redway or other infrastructure is needed to bridge a current gap in the walking and cycling network
- Redway improvements such as widening a route or making it easier to cross a road
- Non-Redway local schemes such as creating low traffic neighbourhoods and extra cycle parking

[3] Defra. Environmental Improvement Plan 2023, January 2023
[4] Defra. Air Quality Strategy – Framework for Local Authority Delivery, August 2023
[5] DfT. The Road to Zero: Next steps towards cleaner road transport and delivering our Industrial Strategy, July 2018

Site visits were made to longlisted areas to prioritise and scope out the work. The City Council calculates a prioritised scheme shortlist would cost in the region of £36.3m.

While some of the improvements will be covered by existing budgets, the majority will be subject to successful bids for Government funding – and the City Council anticipates that by publishing a detailed Local Cycling and Walking Infrastructure Plan it will help to bring more national funding to Milton Keynes.

“We are extremely proud of our fantastic Redway network in Milton Keynes, which many people used heavily during the pandemic, and we want to build on this to make walking, cycling and scooting even more attractive for exploring MK, or as the default choice for short trips. Not only is this great for local people’s health and wellbeing, it will also help to tackle the climate emergency.

“Publishing this plan means we can prioritise investment and guide sustainable new developments, as well as putting us in a better place to bid for national funding to make the improvements happen. I’m grateful to everyone who took the time to contribute ideas to the plan, and proud that it’s full of practical suggestions that have been created ‘by the people for the people’.”

- Cabinet Member for Climate Change and Sustainability (2023), Cllr Jennifer Wilson-Marklew.

MK Connect

MK Connect is the city’s local transport service aimed at residents who aren’t served by an existing bus route and can’t get around by other means. Vehicles are shared by passengers

heading the same way, with pickups typically within a couple of hundred metres of the passenger's home. Around 435,000 journeys were made last year using MK Connect. It was introduced by the City Council in 2021 and is the biggest service of its kind in the UK. Prior to the introduction of MK Connect, disabled users and those that wanted to travel in the evenings and on Sundays had very limited transport options, but they can now rely on the service to get them around. In 2022 the demand-responsive transport service replaced 56,000 journeys that would have otherwise been made using a car. I survey reported in January 2023 of MK Connect passengers found that 13% of respondents were now using MK Connect instead of a private car. By making their journeys in a shared vehicle instead of a car – tens of thousands of kg of carbon emissions have been saved.

"We're proud that MK Connect is having such a positive impact for our residents who rely on the service. We've learnt lessons from when we first introduced MK Connect and we're always listening to feedback and looking for ways to improve the service even further. It's thanks to innovative transport methods like this that we can help people get around our city in a sustainable way and achieve our climate ambitions."

- Cabinet Member for Climate Action and Sustainability (2023), Cllr Jennifer Wilson-Marklew

City Council on course to be carbon neutral by 2030

Energy efficient council homes, LED street lighting and generating renewable energy through a solar farm all form part of Milton Keynes City Council's strategy to be a world leading sustainable city.

The City Council has cut its own carbon emissions by tens of thousands of tonnes in the last four years and modelling shows that it is well on the way to achieving its ambition to become carbon neutral by 2030.

Some of the key city council projects as part of this work include:

- LED Street lighting – since 2014, the City Council has upgraded almost 40,000 streetlights, leading to a cumulative saving of 29.2 million kWh of electricity and over 38,000 cumulative tonnes of carbon. The remaining 20,000 lights will be upgraded for Spring 2024.
- Green Homes – planning to deliver energy efficiency measures to more than 1,900 council homes as part of the MKCC housing and maintenance programme, with support funding from the Government's Social Housing Decarbonisation Fund
- Solar farm – the City Council is currently exploring renewable energy generation options, which could include a large-scale solar farm.

The City Council is committed to ensuring every person and business in MK can play a part in tackling the climate crisis. Through its award-winning Sustainable Construction Planning Document, the City Council requires that all future developments in MK meet the highest sustainability standards.

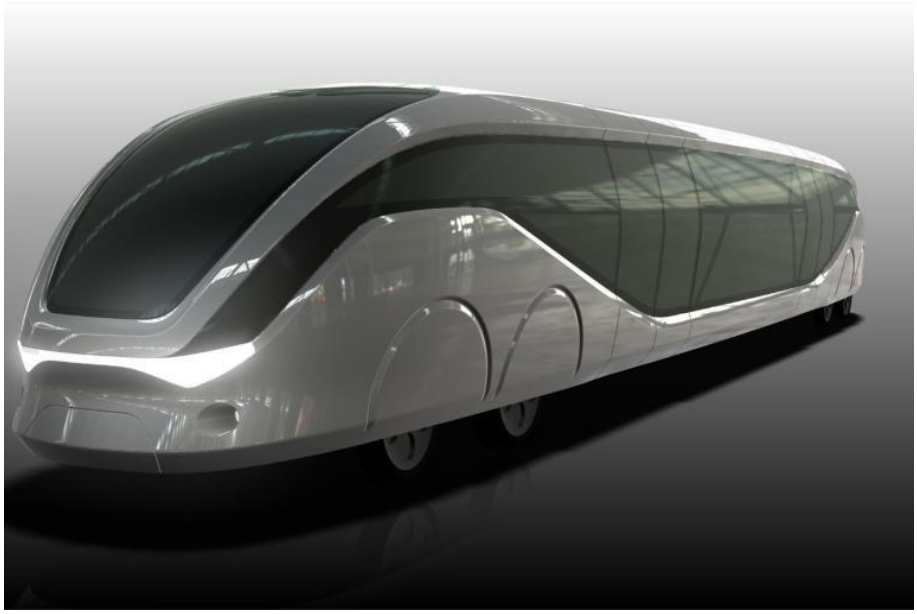
Throughout the cost-of-living crisis, residents are being helped with cutting their energy costs and usage. Last year, the City Council funded a 'Warmth and Wellbeing' helpline which around 300 people have called since it opened in November 2022. Callers have received advice by an expert team on debt and bills, saving energy, and how to apply for grants to make a home better insulated and more energy efficient.

Local people can call freephone 0800 107 0044 to get expert advice from National Energy Foundation's Better Housing Better Health team, who will assess their situation and suggest help including how to get better energy deals.

"These projects are much more than just meeting targets – they will define the way we live and the place we become as a city. Whether it's making our homes more energy efficient, finding ways to generate energy or making it easier for people to leave their cars at home, we will continue to work with everyone in our city to make MK an even better and healthier place to live."

- Cabinet Member for Climate Action and Sustainability (2023), Cllr Jennifer Wilson-Marklew

Major boast for advanced rapid transport in MK



A high-speed, driverless transport network could transform the way people get around in

Milton Keynes after the City Council successfully secured government funding to research the innovative project.

Advanced Very Rapid Transport (AVRT) is a new concept in mass transit, using automated vehicles on purpose-designed segregated pathways. The City Council secured £200,000 funding to commission a study to determine how the AVRT project could fit in with the city's current and proposed infrastructure. It also builds on the City Council's ambitions to deliver well-planned and sustainable growth through its New City Plan.

The study will look at how AVRT could provide future transport solutions and deliver fast, frequent and reliable public transport. An area of key routes around 18 miles in and around Milton Keynes will be the focus of the study.

Milton Keynes City Council already has ambitious plans to boost MK's smart city reputation through delivering a modern mass transit system. The study will analyse how the systems could be integrated and build on the City Council's innovation and sustainability ambitions.

"Delivering a sustainable and effective transport system is exactly what we need to do as a modern smart city. A project like this will not only enable us to move faster, it will also open up new gateways into our city, attracting a wider range of people to live, work and set up their businesses here. This study will help us look at how we make the most of the opportunities AVRT presents to bring cleaner and affordable travel to MK."

- Leader of MK City Council, Cllr Pete Marland

Notes:
MK City Council will be partnering with leading businesses to support the study. These companies will be investing an additional £200,000 into the study.
The companies include:
Costain- one of UKs leading construction and infrastructure companies
ARUP - a world class multidisciplinary consultancy firm
Equipmake – leading work on powertrains for the advanced vehicles
Avant Design – creating vehicle designs
Conigital – providing support for developing the vehicles autonomous control systems

New Electric car charging technology trialled in MK

Milton Keynes City Council is partnering with Kerbo Charge to trial a new electric car charging product that could unlock home charging for more local people without off street parking, as well as potentially saving them more than £1,400 per year compared to charging solely at fast public chargers.

The product is installed in tarmac or stone pavements directly outside a customer's home, creating a narrow channel (32mm deep, 39mm wide) with a hinged lid in which the user can easily place a charging cable, running it to their car with no trip hazards from trailing cables.

John and Grace Obidipe (pictured) who live in Oxley Park are among the first to trial the product. Prior to enrolling onto the trial the family either needed to trail a cable over the pavement or drive one mile to their nearest charge point to charge their car.

They now have a specially designed polymer channel with a self-closing lid in the pathway outside their house, which they can switch on using an app. Some of the residents involved in the trial will also receive faster charging smart chargers from UK charger manufacturer Indra - residents can then charge their car up to three times as fast as regular household sockets.

If the trial is successful, MK City Council will begin making the product available to more residents across the city.

Get Around Rewards through BetterPoints app

A rewards system which could earn local people free vouchers for major retailers if they travel using greener methods returned in March 2023.

Milton Keynes City Council ran its Get Around Rewards again in 2023, from March to end of October, through the BetterPoints app. The BetterPoints system adds points for every sustainable journey made, logging it through the BetterPoints app. Participants just need to download the app, join Get Around Rewards and ensure their location is on and points are allocated automatically. This includes walking, wheeling, cycling and using the bus – as well as using MK Connect and the Enterprise Car Club. Each month there was a prize draw to win £50 or 50,000 BetterPoints and throughout the campaign there were plenty of opportunities for people to boost their points total by attending any of the Get Around MK events.

Almost 200,000 sustainable journeys were logged in MK in 2022 using BetterPoints, covering nearly 350,000 miles.

Once enough points have been built up, users can cash the points in for free vouchers at major retailers, including Currys, Ikea, John Lewis and many others. Alternatively, people had the option to donate their points to the Mayor's nominated charities Medical Detection Dogs and MK SNAP or a charity of their choice.

"We were really encouraged by how popular the scheme was last year and hope that even more people take advantage this time. It's a really simple way to grab some freebies from your favourite shops all while getting fit and doing your bit for the environment. I encourage everyone to get involved and make the most of the offer while it lasts."

- Cabinet Member for Climate Action and Sustainability, Cllr Jennifer Wilson-Marklew

Aim to be Britain's greenest weekly waste collections

Milton Keynes City Council has announced ambitious plans for Britain's greenest weekly waste and recycling collections to help battle climate change, three decades after it became the first place in the UK to introduce kerbside recycling.

The City Council delivered wheelie bins to 104,000 homes ahead of a new cleaner and greener waste and recycling collection which started in September 2023.

The vast majority of households now use a new black wheelie bin for non-recyclable waste and two new bins for recyclables (red lid for paper and card and blue lid for plastic, metal and glass) which means the city council can scale back on using millions of plastic sacks. Some residents without space or access for bins will continue to use black sacks and will separate their recyclables into new red and blue sacks.

Separating recyclables is a proven way to increase how much residents recycle, as well as the quality of what's recycled, which is good for the environment. Just under half of local authorities in our region use four or more bins to separate their recycling and waste. Households in the world's top recycling nation, Germany, use six bins.

Milton Keynes City Council has a target to increase recycling rates to more than 60%, currently 52%.

However, its plan to be the nation's greenest weekly collection goes well beyond what's in the bins. From day one, a new state of the art 65-vehicle waste collection fleet will produce lower carbon emissions, thanks to fully electric bin lifts which cut fuel consumption and emissions by around 10%. The vehicles have been designed and built by the leading British manufacturer Dennis Eagle and are among most technically advanced trucks on the road.

Four of the vehicles will be fully electric, which produce zero emissions, and the fleet will eventually become almost entirely electric.

Starting from 2023 the power for the street cleaning and grounds maintenance vehicles will come from MK's own waste. Since 2018, the city council has been processing household rubbish and turning it into sustainable energy, meaning very little waste from MK goes to landfill.

"Milton Keynes was the first place to introduce kerbside recycling and now we want to be the greenest and the best. Coming to the end of our waste contract gave us an opportunity to create a far more environmentally responsible collection service, and we believe that these innovations - and more yet to come - will help us become Britain's greenest weekly waste collection.

"Recycling is one of the most impactful ways we can tackle climate change as individuals, as it helps to conserve natural resources, and reduces air and water pollution. Separating card/paper from other recycling at home will help to increase the amount we recycle enormously as unlike now, we won't have to waste loads of recycling because paper is wet or has been contaminated by food waste. Everyone can help Milton Keynes become the greenest and I'd like to thank local residents for playing their part."

- Cllr Lauren Townsend, Cabinet Member for the Public Realm (2023)

Rights of Way Improvement Plan

Milton Keynes - already ranked by The National Highway and Transport Public Satisfaction Survey as one of the best places in the country for its public rights of way network - is set to have further improvements.

The city council's new Rights of Way Improvement Plan which was adopted by the council on 20th June 2023, is the 10 year strategy for how improvements will be made to the Rights of Way in Milton Keynes over the period 2023-2033.

The plan assesses the extent to which the rights of way network in Milton Keynes meets the present and future needs of users. It evaluates the priorities for the rights of way network, what users would like from the service, and how we can improve walking, equestrian and cycling opportunities for all. A statement of actions sets out how improvements will be managed and delivered to provide a high quality, well maintained and accessible public rights of way network.

There is an estimated 550km of public footpaths, bridleways and byways in Milton Keynes and our plan includes proposals for:

- Encouraging healthy lifestyle choices through providing opportunities for exercise, leisure, open-air recreation and promotion of active travel.
- Improved linkages between rights of way to avoid the need to travel along roads to reach one right of way from another.
- Addressing accessibility issues and other barriers that those with mobility problems, the visually impaired, and under-represented groups face when using the public rights of way network.
- More informative signage and maps available for download.

"I hope with even more improvements to the right of way network, we can encourage more people to use our city's vast number of open green spaces on foot and bike and explore what MK has to offer."

- Cabinet Member for the Public Realm (2023), Cllr Lauren Townsend

Milton Keynes: City of Trees

Milton Keynes City Council has published a plan that describes how urban trees will be cared for in 'Milton Keynes: City of Trees', with the first project to replace dead or dying trees at Lloyds Court and Midsummer Boulevard.

Trees are vital to a city's ecosystem - storing carbon, improving air quality, promote urban cooling and supporting biodiversity among other benefits. Milton Keynes was always intended to be a place where trees would form part of the urban landscape and the scale of planting in Milton Keynes during the 1970s was unprecedented.

Sadly, in those days less was known about urban planting. Many trees of the same type were planted, which was useful for fast coverage but in the long term has made the trees more susceptible to pests and disease. Additionally, some trees were planted in small holes in paving called tree pits. We know today that the size and type of tree didn't always match the space where they were planted, which means some have died or are dying.

The new plan sets out a golden rule to use the right tree in the right place, and to use modern tree planting knowledge to improve the tree pits. The city council has planted resilient varieties better suited to the environment, including the Holm Oak (an evergreen that's less susceptible to pests than other oaks) and the Honey Locust (which has cream flowers in the spring and can live around 120 years).

Over the recent autumn and winter planting season, the city council has planted 220 additional trees around the city. Residents can help newly planted trees to flourish by topping up a hydration bag. Any water is fine - rain, tap and even used dishwater.

Milton Keynes City Council has planted new trees in specially designed 'tree pits' in Central Milton Keynes as part of a wider plan for heathier trees around the city.

Further planting includes 30 new trees in at Station Square and Midsummer Boulevard, and 15 in Woughton. Winter is peak tree planting period and the city council will be planting more than 200 trees before the spring.

"Our new City of Trees plan sets out how we can best conserve and add to our urban trees, which play such an important part to the quality of our urban spaces, and to the city's identity. We have a plan to make sure new urban trees live longer and healthier lives."

- Cabinet Member for the Public Realm, Cllr Lauren Townsend

£1.2m secured for new walking and cycling route

Milton Keynes City Council has successfully secured £1.2m to create a new walking and cycling route connecting Newton Leys to the Blue Lagoon Nature Reserve in Bletchley.

The route is part of wider walking and cycling improvements that are being delivered under the Bletchley and Fenny Stratford Towns Deal which will see major investment and renewal in the area.

Funding for the new route has been secured through the Government's Active Travel Fund. The new route is expected to open in 2024 and will create a more direct connection to Bletchley and open up access to the nature reserve for local people. Construction of another route connecting the Blue Lagoon to the wider Bletchley area is already underway.

In 2021, £22.7m was secured through the Towns Deal Fund for Bletchley and Fenny Stratford. The walking and cycling route connecting Newton Leys to the Blue Lagoon was due to be funded through the initial Bletchley Towns Deals Fund allocation, but inflation issues meant the project costs couldn't be fully covered. The city council successfully sourced alternative funding to ensure this important project is delivered.

More details about the Towns Deal can be found on the Ground Breaking Bletchley and Fenny Stratford website.

"The new route will be welcomed by local people who will have an added incentive to either walk or cycle to where they need to go. We've got big ambitions for Bletchley and Fenny Stratford and this is just one of the projects we're working on to bring transformational change to the area."

- Leader of MK City Council, Cllr Pete Marland

Milton Keynes Cycle Carnival

The Milton Keynes Cycle Carnival took place on 13 July 2023, a fun festival which included cycle stunt contests, vintage cycling shows, awards, a Panacea samba band and much more.

The Cycle Carnival is a family-friendly annual celebration of cycling and active lifestyles funded by Milton Keynes City Council through the Active Travel Fund and organised by Cycling Citizens:MK. Around 200 cyclists of all abilities took part. Santander offered a free bike to borrow for three hours for anyone wishing to attend who doesn't own a bike.

The event aims to promote sustainable transport, bring communities together and encourage healthy living.

Love Exploring MK app

Almost two years ago, MK City Council launched a new augmented reality app to help children and families to explore the city. Since then, the Love Exploring app has been downloaded more than 12,000 times with an estimated 25,000 kilometres walked, cycled, or wheeled by local people.

The free to play smartphone app showcases more than 50km of specially designed pedestrian trails in 18 different locations around Milton Keynes. It's brought planets, fairies, dinosaurs, and spooky creatures to parks and streets to encourage children and young people to get active and explore their local area.

Suitable for all ages, the Love Exploring app is packed with local history and little-known facts, and uses interactive maps, guided tours, and quizzes to bring landmarks to life. People can download the Love Exploring app on a smartphone, select a local park or visitor attraction and scan away using the camera on their device.

The app was commissioned by Milton Keynes City Council and developed in partnership with Sprytar and local organisations including The Parks Trust. The Love Exploring app is available via Google Play and the App Store. You can also download it from the official website.

"This free app is ideal for families looking to keep children entertained over the school holidays. There are all sorts of fun games and special features designed to help explore our beautiful parks and local historical places. It's one of many ways we're providing families with free and low-cost holiday activities."

- Cllr Jane Carr, Cabinet Member for Tackling Inequalities and Child Poverty (2023)

BP Pulse electric charging

Milton Keynes City Council working in partnership with BP Pulse has installed 25 new rapid chargers in Central Milton Keynes (CMK), enabling motorists to get an 80% charge in just 20 minutes.

The cutting-edge technology aims to revolutionise electric charging in the city, making it faster, more accessible, and convenient for both local people and visitors. As well as getting an impressive 80% charge in 20 minutes, motorists can also get a quick top up of 30 miles within just ten minutes if they are running low.

Milton Keynes has one of the biggest and fastest charging networks in the UK. The city council is replacing its existing fast electric vehicle chargers with new 7kW chargers to support long-stay charging around offices, hotels, and attractions.

Milton Keynes City Council with its partner BP Pulse have also secured funding through the Government's On Street Residential Charging Scheme to add over 100 more fast charge points in residential areas, where there is less off-street parking. These installations took place over the autumn, giving residents who are thinking of making the switch to electric, greater flexibility and confidence that the local electric charging infrastructure is in place to support them on their journey to electrification.

"We're proud to announce the installation of these new rapid chargers, making it easier for electric vehicle users to charge their cars. One of the biggest challenges we face in encouraging people to make the switch to electric cars is that the charging infrastructure isn't good enough yet. We hope this important step gives people the added confidence that MK is one of the best places to own an electric car and encourages those people thinking about it to make the switch."

- Cabinet Member for Climate Action and Sustainability (2023), Cllr Jennifer Wilson-Marklew

Self-driving shuttles

Milton Keynes City Council and its partners have successfully secured almost £2m in grant funding to deliver new state of the art self-driving shuttle services into the city.

The StreetCAV project (CAV standing for 'connected and autonomous vehicles' which vary from one-seaters up to vehicles similar in size to a bus) will install the connectivity and other infrastructure necessary for self-driving shuttles that seat multiple passengers, as well as robotic and drone-based services to operate safely. The City Council has teamed up with Smart City Consultancy and other partners to deliver the scheme, which will be used to trial the technology before consideration is given to rolling it out across the country.

The funding secured in Milton Keynes comes from a wider pot of £18.5 million in government funding being made available to projects that will strengthen the UK's automated supply chain.

"Milton Keynes really is the home of innovation and we're committed to exploring new forms of sustainable transport so local people can benefit, as well as helping other cities around the world learn how to be greener places to live and work. Demand-responsive, autonomous vehicles can help to reduce congestion, and create a cleaner environment so it's a really exciting trial to lead on. Additionally, attracting global organisations to test these ideas in Milton Keynes also provides potential for new high-tech, high-skill jobs."

- Leader of MK City Council, Cllr Pete Marland

Self-driving vehicle trial

Milton Keynes was selected to trial a new self-driving shuttle as part of a Europe-wide research project that's the longest and most geographically complex of its kind.
The LivingLAPT project is funded by EIT Urban Mobility and led by University College London (UCL).

An autonomous shuttle uses five lidar sensors and seven cameras to create a full 360-degree view around the vehicle and navigate safely along public roads. It has an operator on board, capable of taking control at any time. The trial follows similar successful trials in Prague and Brno in the Czech Republic in 2023 and in Helmond, Hasselt, Kongberg and Ricany in 2022.

However, in Milton Keynes – widely considered a living laboratory for research thanks to its involvement in a range of emerging technology trials – the shuttle will navigate multiple stops and carriageways for a far longer period.

Operated by the UK-based transport technology specialist Aurrigo, the fully accessible electric shuttle can carry up to 15 passengers. From September 2023, it ran a city centre loop connecting Santander's new UK HQ at Unity Place with centre:mk, the Theatre District and Station Square.

The shuttle was monitored by UCL whose research team were in Milton Keynes talking with users in the trial to find out how the service can be developed to meet passenger needs.

The research project also saw a new autonomous delivery shuttle test its capabilities at Stadium MK. Operated by Bring Auto and using a Smart Fleet Management platform from Applied Autonomy, the shuttle is about the size of a small car and will took deliveries around the stadium site over a two-week period during November. It can interact with an external ordering system to fulfil orders without the involvement of a human operator.

“Once again, Milton Keynes is at the forefront of a new, sustainable technology trial. We’ve proven again and again that the city is a brilliant destination for technology leaders to develop their plans into real world solutions. This important research into self-driving vehicles on public roads is creating a template for cities around the world to follow. We’ll work alongside University College London to ensure everyone benefits from the data they gather.”

- Cllr Jennifer Wilson-Marklew, Cabinet Member for Climate Action and Sustainability (2023)

Free ‘hopper service’ in CMK

Milton Keynes City Council and local bus operators launched a free ‘hopper service’, connecting MK Central Station to Unity Place, centre:mk and the Theatre District among other venues in the city centre.

The bus companies taking part included Arriva, Uno, Stagecoach, Red Rose Travel and Z&S Transport. The ‘hopper’ could be accessed on all bus stops from Station Square to Theatre District. Passengers simply needed to ask for a ‘hopper’ fare when they board a bus belonging to any of the participating firms.

The free ‘hopper’ was available from October 2023 until 31 March 2024. It was funded using government money provided from the Bus Improvement Plan. This is a partnership between government, bus operators and the city council to understand passenger requirements and deliver a better service. The government funding is not designed to save routes at risk, but instead deliver concessionary schemes decided by the Department for Transport (DfT).

In September MK City Council launched a separate campaign to grow passenger numbers on seven bus routes.

We hope this initiative will help visitors to the city centre, especially as we approach the festive season, and following the opening of Unity Place – which we know is already very popular. We fully support the project, but we know this funding will only provide temporary relief. We’ll continue to campaign for the right funding with greater powers on how it is spent to deliver meaningful services.”

- Cabinet Member for Climate Action and Sustainability, Cllr Jennifer Wilson-Marklew

Printed Bus Timetables to Encourage Use

Milton Keynes City Council is using Government funding to provide residents with printed bus timetables as part of a campaign to encourage more people back onto buses and secure the future of services.

The Government's £2 cap on bus fares which was due to end on 31 October 2024 was extended to 31 December 2024. Councils have been also provided with Government funding to improve public transport and the city council and bus operators are using this to share information with residents about local bus services, and to raise awareness of the benefits of 'getting back on the bus'.

Across the UK, fewer people have been using buses since the pandemic and in Milton Keynes overall bus use has dropped by around 15%. But the drop is even more significant - down by a third - for local people entitled to concessionary fares.

Milton Keynes City Council has used some of the ringfenced funding to print a travel guide including bus timetables following feedback from some residents that a printed timetable better suits their needs. This will be available in libraries as well as delivered to homes. The city council continues to publish timetables online as well as an interactive map of stops and an online journey planner.

Conclusions and Priorities

All air quality objectives have been achieved throughout the Borough even though the city continues to grow rapidly. Concentrations of NO_2 in Milton Keynes are slightly up from 2022 but lower than 2021 and continuing the long-term downward trend. This long-term downward trend has also been seen in the levels of PM_{10}. Priorities for the coming year are to continue promoting the use of ultra-low emission vehicles (ULEVs) and the initiatives in the MK Go Ultra Low City scheme. The public will also be encouraged to use public transport and to cycle and walk making full use of the extensive (325 km) Milton Keynes redway system. The new Local Cycling and Walking Infrastructure Plan focuses on delivering smaller "missing links" schemes (gaps in the redway network), planning new larger schemes, where there is no infrastructure at present, as well as improving existing redway infrastructure. The Council will be following the vision set out in the MK Strategy for Future 2050 and promoting the use of the Get Around MK app and new MK Connect Service. We hope to continue the success of the e cargo bikes and e scooters, and make further progress the community electric car clubs across Milton Keynes.

Actions and initiatives detailed in the governments' Clean Air Strategy 2019 (published January 2019) are designed to reduce emissions and air pollution leading to improved health and quality of life.

The new Local Plan for Milton Keynes, Plan:MK, covering the period up to 2031 was adopted by Milton Keynes Council on 20 March 2019. Details of the council's major developments, including a location map of sites can be found on the Planning Hub.

All applications for new developments that may have an impact on air quality have been assessed against the guidance documents produced by the Institute of Air Quality Management (IAQM).

Local Engagement and How to get Involved

Milton Keynes has a huge network of redways, super routes, leisure routes and places to ride. Make up your own route or follow one of our suggestions. You can also join a group, go on an organised ride or take part in an event, there are lots of ways you can get involved and take up cycling in MK. We're a cycle friendly city with commuter facilities, secure cycle parking and a lot of cycle shops.

Improve your cycling knowledge by taking a course – learn to ride, Bikeability or maintenance, there's something for all abilities.

MK Connect is our local transport service aimed at residents who aren't served by an existing bus route and can't get around by other means. Vehicles are shared by passengers heading the same way, with pickups typically within a couple of hundred metres of the

passenger's home. More than 400,000 journeys have been made on MK Connect in the last year. Further information is available on the MK Connect service.

Take the bus. You can find the timetables online as well as an interactive map of stops and an online journey planner.

Try car sharing:

- Car sharing can reduce the number of miles you put on your car and save you money in fuel and maintenance costs.
- Sharing the drive can also reduce your stress levels.
- If you commute with someone else in your company you can get to learn about their department and work.
- You could even make new friends or be a part of a new social group.

Use Milton Keynes Liftshare to find someone who's travelling the same journey, save on fuel and have some company on the commute.

Join the Central Milton Keynes car-sharing scheme:

Milton Keynes City Council Car Share is a parking permit for Central Milton Keynes employees who share a journey to work. Join the permit scheme for just £130 a year per person (£65 per person for a six month permit) to receive the following benefits:

Free parking in all standard rate spaces and over 350 reserved cars share bays in prime locations. Please see our Central Milton Keynes parking map for locations of our ample central standard (purple) bays.

Interested to learn more, visit the Car Sharing pages.

Local Responsibilities and Commitment

This ASR was prepared by the Environmental Health Department of Milton Keynes City Council with the support and agreement of the following officers and departments:

Environmental Health, Transport, Planning, Public Health and Sustainability teams.

If you have any comments on this ASR please send them to Megan Harrison at:

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Tables

1 Local Air Quality Management

This report provides an overview of air quality in Milton Keynes 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 Milton Keynes City Council to improve air quality and any progress that has been made.

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

2 Actions to Improve Air Quality

2.1 Air Quality Management Areas

Air Quality Management Areas (AQMAs) are declared when there is an exceedance or likely exceedance of an air quality objective. After declaration, the authority should prepare an Air Quality Action Plan (AQAP) within 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.

Milton Keynes City Council currently does not have any declared AQMAs. A local Air Quality Strategy is under development to prevent and reduce polluting activities

2.2 Progress and Impact of Measures to Address Air Quality in Milton Keynes

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

Defra comments	MKC comments
The report is well structured, detailed, and provides the information specified in the Guidance.	Noted
1. MKCC have included the comments from the 2022 Appraisal Report as well as comments showing these have been addressed. This is appreciated and the Council should continue this in future reports.	Noted and continued in this year's report.
2. The discussion of trends in monitoring concentrations is very limited, there should be greater discussion of trends included in future for all monitored pollutants.	Greater discussion of trends included
3. Table 2.2 clearly shows the funding status and status of each measure. This is encouraging to see.	Noted
4. The presentation of long-term trends for all automatic monitoring sites is very useful. However, the results for diffusion tube monitoring sites presented in Figure A.2 are very difficult to read, in future these results could be split over multiple figures to improve the	Noted and will be included in next year's report

readability of the figures. The Council could split the sites by location.	
5. MKCC have included a detailed table of the new developments with planning permission.	Noted and included again this year, with updates.
6. In Table A.1, the site name for Fixed automatic monitoring site is different to the site name in the completed excel template. Consistency between the tables in the report and in the excel template should be ensured in future.	Noted, consistency with use of 'Civic', corporate decision to drop the word 'Offices'
7. "Error! Reference source not found" is present in Section 3.2.3.	Noted, formatting updated in V2 on website
8. MKCC have included a clear statement that the diffusion tubes have been deployed in line with the Defra calendar, this is appreciated for clarity.	Noted and included in this report
9. In Table 2.1, the "level of exceedance: current year" should be the highest reported concentration within the AQMA. In this report, the automatic monitoring site value of 15.96 µg/m^3 was provided, whilst the diffusion tubes within the AQMA reported higher concentrations, the highest concentration measured in the AQMA was 29.1 µg/m^3 at D1, D2, D3.	Noted and updated to "15.96 µg/m^3 at automatic station, 29.1 µg/m^3 highest diffusion tube" in V2 on website.

10. The maps provided in the Appendix showing the locations of the automatic monitoring sites are very clear and it is useful to see both a Borough-wide map and individual zoomed in maps showing the exact locations for each site. However, the map provided showing the locations of the diffusion tube monitoring sites is not to the same standard. The Council should provide multiple zoomed in maps showing separate areas and the diffusion tube locations in more detail as well as the Borough-wide map.	Close up maps of diffusion tube locations included in this year's report.

Milton Keynes City Council 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. 47 measures are included within Table 2, with the type of measure and the progress Milton Keynes City Council 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.

More detail on these measures can be found in their respective Action Plans, links to which are in the table. Key completed measures are:

- Get Around MK website and app up and running.
- MK Connect Service
- E-cargo bikes up and running
- E-scooters scheme extended
- MK electric car community clubs launched and expanded
- Electric vehicle charging points for older residential areas
- School Streets pilot

- Diamond secure cycle parking
- Kerbo Charge trial
- BetterPoints app rewards scheme

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

- BP Pulse electric charge points installation
- MK City of Trees planting
- Towns Deal new redway construction at the Blue Lagoon

Milton Keynes City Council's priorities for the coming year are:

- Encouraging the continued uptake of ULEVs following the MK Go Ultra-Low City scheme and the expansion of the electric vehicle charging network.
- Continue to promote the Get Around MK website and app
- Progressing the measures in the Milton Keynes Future for 2050 strategy.
- Progressing the projects and measure in the Local Cycling and Walking Infrastructure Plan
- Progressing the measures in the Mobility Strategy, the First and Last Mile Strategy and the Transport Infrastructure Delivery Plan .
- Progressing the measures in the Sustainability Strategy
- Continue to support the StreetCAV and LivingLAPT projects

The measures stated above and in **Error! Reference source not found.** have already achieved compliance in Olney AQMA and Milton Keynes City Council anticipates that they will achieve exposure reduction across the borough.

Table 2.1 Progress on Measures to Improve Air Quality

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
1	Go Ultra Low City Scheme	Promoting Low Emission Transport	Other	2017		MK Council	Office for Low Emission Vehicles (OLEV)	NO	Partially Funded		Implementation	n/a	ULEV ownership per capita	EV Centre opened in July 2017 and by June 2019 had welcomed 100,000 visitors and arranged 4000 test drives.	Trialling of driverless cars on highways and pods on shared footpaths https://www.gov.uk/government/news/40-million-to-drive-green-car-revolution-across-uk-cities
2	Expansion of Electric Vehicle charging network	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2015		MK Council	MK Council/OLEV	NO	Partially Funded		Implementation	n/a	Number of recharging events No of charge points	New charging hub at MK Coachway with 8 rapid and 4 ultra-rapid charge points. More than 400 public charge points installed.	15 min hub sites identified to act as multi charger sites to support residential charging
3	Vivacity - a sensor network providing real-time transport information; volume, classification, speed, turning counts, parking availability.	Traffic Management	UTC, Congestion management, traffic reduction	2017	2018	MK Council/Vivacity	MK Council/Vivacity	NO	Partially Funded		Completed	n/a		Approx 400 sensors on highways and 1300 on parking areas.	Parking data purchased by MyMK for use in parking app. Traffic junction sensors are currently turned off.
4	Urban Traffic Management Control (UTMC) system	Traffic Management	UTC, Congestion management, traffic reduction	2018	2022	MK Council/DfT	National Productivity Infrastructure Fund. Planning tariff/section 106 agreement	NO	Funded		Implementation			First tranche of CMK signals upgraded, more to follow. CCTV and more of system to be delivered in next 2 years.	Installing an urban traffic management control system, inc bus priority measures.
5	UK Auto Drive programme	Promoting Travel Alternatives	Intensive active travel campaign & infrastructure	2015	2018	MK Council, Government, industries	MK Council, Government, industries £19.4M	NO	Partially Funded	£10k - 50k	Completed			Trialling of driverless pods on shared footpaths ongoing. trialling of driverless cars on public highways in MK started March 2018	Research, development and integration of automated and connected vehicles http://www.ukautodrive.com/the-uk-autodrive-project/
6	Free ULEV green car parking permit. Cheaper permits for low emission vehicles	Promoting Low Emission Transport	Priority parking for LEV's	2016		MK Council	MK Council	NO	Not Funded		Implementation	n/a	Number of permits issued	Introduced July 2016	https://www.milton-keynes.gov.uk/highways-and-transport-hub/smarter-choices/electric-vehicle-charge-points

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
7	Smarter travel choices	Promoting Travel Alternatives	Intensive active travel campaign & infrastructure	2012		MK Council	MK Council	NO	Not Funded		Implementation	n/a	Number of visits to website per month, currently 5000 per month	ongoing	New website developed https://www.getsmartertravelmk.org/
8	Love to Ride - website encouraging cycling – cycle September June bike week. Prizes	Promoting Travel Alternatives	Promotion of cycling	2017		MK Council	MK Council	NO	Not Funded		Implementation		Number of new rides and miles ridden per 12 months	All time participation stats up to April 2019: 134 organisations, 1858 people, 434 new riders, 1,147,712 miles 95,929 trips	Cycle incentives website https://www.lovetoride.net/miltonkeynes
9	Super Redway Routes	Transport Planning and Infrastructure	Cycle network	2017		MK Council	MK Council	NO	Not Funded		Implementation			H6 super route completed. Works have been undertaken on other Redway routes e.g. H8 Marlborough St.	Awaiting funding for further routes
10	Cycling information, events and opportunities	Public Information	Via the Internet	2012		MK Council	MK Council	NO	Not Funded		Implementation	n/a		ongoing	Pedalling Culture Website developed http://www.pedallingculture.com/
11	Santander bike hire	Transport Planning and Infrastructure	Public cycle hire scheme	2017	2020	Santander/Nextbike	Santander/Nextbike	NO	Funded		Completed	n/a	Number of hires	300 bikes 42 docking stations	Scheme relaunched in Dec 2019 with new cycle fleet and docking stations.
12	Lime-E Bikes	Transport Planning and Infrastructure	Public cycle hire scheme	2018		Lime	Lime	NO	Funded		Implementation	n/a	Number of hires	50 bikes supplied (dockless GPS tracked)	Bikes are unlocked using phone app
13	Public Health support for healthy schools	Promoting Travel Alternatives	Promotion of walking	2019	2024	MK Council	MK Council	NO	Not Funded		Implementation	n/a	No. of schools engaged	MoreLife UK commissioned to deliver- due to start schools element in Sept 2019	Working to improve the whole school environment to reduce childhood obesity- from physical activity policies to staff training and will include active travel
14	Modeshift STARS – national schools	Promoting Travel Alternatives	School Travel Plans	2017		MK Council/DfT	DfT	NO	Partially Funded		Implementation		Number of schools registered	40 schools registered. 19% light green modes (bus, park&stride, car sharing) 41% green modes	Walk to school, bike school and scooter training https://modeshiftstars.org/#

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
	awards scheme													(walking, cycling, scooting) 40% car	
15	East West Rail	Transport Planning and Infrastructure	Public transport improvements-interchanges stations and services	2019	2024	East West Railway Company / Network Rail	EWR Consortium	NO	Funded		Implementation	n/a		Phase 1 complete. Phase 2 construction started early 2020	https://www.eastwestrail.org.uk/
16	A421 Dualling to M1 J13	Traffic Management	Strategic highway improvements, Re-prioritising road space away from cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	2018	2021	Central Beds Council/MK Council	DfT £28.5m project	NO	Funded	£10k - 50k	Completed			Initial preparatory roadworks commenced Sept 2018	http://www.centralbedfordshire.gov.uk/transport/a421/overview.aspx
17	Highways England All-Lane Running (ALR) Smart Motorway	Traffic Management	Strategic highway improvements, Re-prioritising road space away from cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	2018	2022	Highways England	Highways England £373m project	NO	Funded	£100k - £500k	Planning	Environmental report found NO2 emissions not significant and scheme will ease congestion		Works commenced June 2018	https://highwaysengland.co.uk/projects/m1-junction-13-to-junction-16-smart-motorway/
18	Real time passenger information (RTPI) – bus routes	Transport Planning and Infrastructure	Bus route improvements	2014		MK Council	MK Council	NO	Not Funded		Implementation	n/a		Most key routes now have RTPI	https://www.milton-keynes.gov.uk/highways-and-transport-hub/bus-and-taxi/real-time-passenger-information
19	E-cargo bikes project	Promoting Travel Alternatives	Promotion of cycling	2020	2021	MK Council	Govt grant £220K	NO	Funded	£50k - £100k	Implementation		Mileage undertaken using electric bikes	21 e-cargo bikes purchased	Level of take up for lease - will promote this for businesses https://getaroundmk.org.uk/cycling/e-cargo-bikes
20	Milton Keynes Strategy for 2050	Other	Other	2020	2032	MK Council		NO	Not Funded		Planning			Long term strategy approved by Cabinet Dec 2020	https://www.mkfutures2050.com/

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
21	Electric Vehicle charging technologies trial	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2020	2021	MK Council CrowdCharge Flexitricity		NO	Funded		Implementation			Trial in progress	https://crowd-charge.com/
22	E-scooters	Alternatives to private vehicle use	Other	2020	2024	MK Council, Lime, Spin, Ginger	DfT	NO	Funded		Implementation		Number of hires	Initial trial of 50 completed, now 300 available for public use	https://getaroundmk.org.uk/get-connected/go-electric/e-scooter-trials
23	Solar powered bus stops	Transport Planning and Infrastructure	Public transport improvements-interchanges stations and services	2020	2021	MK Council	MK Council	NO	Not Funded		Implementation			Two displays installed	
24	Get Around MK website and app	Promoting Travel Alternatives	Personalised Travel Planning	2021	2021	MK Council	MK Council	NO	Partially Funded		Implementation			Get Around website and app launched	https://getaroundmk.org.uk/
25	MK Connect	Alternatives to private vehicle use	Other	2021	2021	MK Council	MK Council	NO	Partially Funded		Implementation		Number of hires	MK Connect in operation	https://ridewithvia.com/mk-connect/
26	Electric vehicle community charging hubs	Alternatives to private vehicle use	Car Clubs	2021	2023	MK Council	MK Council	NO	Partially Funded		Planning			The 1st hub has opened at Saxon Gate, Stony Stratford will open soon. More to follow	https://getaroundmk.org.uk/news/milton-keynes-community-charging-hubs
27	Bicycle parking	Alternatives to private vehicle use	Other	2021	2022	MK Council, Turvec, PWLC	MK Council, Turvec, PWLC	NO	Partially Funded		Implementation			Project launched	https://getaroundmk.org.uk/get-connected/work-smarter/cycling-parking
28	Electric vehicle charging points for older residential areas	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2022		MK City Council, Connected Kerb, Ringway, OZEV	OZEV	NO	Funded	£1 million - £10 million	Implementation			Work has commenced	https://getaroundmk.org.uk/news/residential-electric-vehicle-charging
29	Milton Keynes Car Club	Alternatives to private vehicle use	Car Clubs	2022		MKCC, Enterprise Car Club	MKCC, Enterprise Car Club	NO	Funded		Implementation		Number of hires	Some clubs have opened	https://getaroundmk.org.uk/get-connected/go-electric/car-club

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
30	School Streets Pilot	Promoting Travel Alternatives	School Travel Plans	2022		MK City Council	MK City Council	NO	Partially Funded		Implementation			Pilot of two schools. More planned	https://www.milton-keynes.gov.uk/school-streets
31	5G network enabled one stop shop transport app	Promoting Travel Alternatives	Other	2022		MK City Council	MK City Council	NO	Not Funded		Planning			Local 5G service being implemented	https://www.milton-keynes.gov.uk/news/2022/mk-lead-way-one-stop-shop-transport-app
32	Diamond secure cycle parking	Promoting Travel Alternatives	Promotion of cycling	2022	2022	MK City Council	MK City Council	NO	Not Funded	£50k - £100k	Completed		Number of uses	Streetpods have been installed at various CMK locations	https://www.milton-keynes.gov.uk/news/2022/mk-council-installs-new-diamond-secure-cycle-parking-city-centre
33	Drone project	Other	Other	2022		MK City Council, Cranfield UniversityWestcott DronePort	Government funding	NO	Funded	£500k - £1 million	Planning			Planning and development stage	https://www.milton-keynes.gov.uk/news/2022/city-council-secures-ps1m-drone-project
34	Local Cycling and Walking Infrastructure Plan	Promoting Travel Alternatives	Intensive active travel campaign & infrastructure	2023		Milton Keynes City Council	Government funding	NO	Funded	> £10 million	Implementation			Published and projects underway	https://www.milton-keynes.gov.uk/highways/transport-policy/local-cycling-and-walking-infrastructure-plan
35	Advanced Very Rapid Transport (AVRT)	Transport Planning and Infrastructure	Other	2023		MKCC, Costain, ARUP, Equipmake, Avant Design, Conigital	Government funding	NO	Funded	£100k - £500k	Planning			Funding secured to commission study	https://www.milton-keynes.gov.uk/news/2023/major-boost-advanced-rapid-transport-mk
36	Kerbo Charge trial	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2023	2024	Milton Keynes City Council, Kerbo Charge, Indra	MK City Council, Kerbo Charge	NO	Not Funded		Implementation			Trial started	https://www.kerbocharge.com/
37	BetterPoints app rewards scheme	Promoting Travel Alternatives	Other	2023	2023	Milton Keynes City Council, Betterpoints	Milton Keynes City Council	NO	Partially Funded		Completed		Number of sustainable journeys logged	Completed	https://getaroundmk.org.uk/news/get-around-rewards
38	Electric waste collection vehicles	Vehicle Fleet Efficiency	Fleet efficiency and recognition schemes	2023		Milton Keynes City Council	Milton Keynes City Council	NO	Partially Funded		Implementation			Currently 4 vehicles fully electric. All vehicles have electric bin lifts	https://www.milton-keynes.gov.uk/news/2023/aiming-be-britains-greenest-weekly-waste-collections
39	Rights of Way Improvement Plan	Promoting Travel Alternatives	Promotion of walking	2023	2033	Milton Keynes City Council	Milton Keynes City Council	NO	Partially Funded		Planning			10 year strategy published with number of projects to implement	https://www.milton-keynes.gov.uk/environment-parks-and-open-spaces/rights-way/rights-way-improvement-plan

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
40	MK: City of Trees	Other	Other	2023	2024	Milton Keynes City Council	Milton Keynes City Council	NO	Not Funded		Implementation		Number of trees	Some of the trees have already been planted	https://milton-keynes.moderngov.co.uk/documents/s10204/Urban%20Tree%20Planting%20Plan%202023-2030_Annex%20A.pdf
41	Towns Deal new redways	Transport Planning and Infrastructure	Cycle network	2023	2024	Milton Keynes City Council	Government funding	NO	Funded	£1 million - £10 million	Implementation			Funded secured, redway in construction	https://groundbreakingbletchleyandfenny.co.uk/
42	Love Exploring app	Promoting Travel Alternatives	Promotion of walking	2021		Milton Keynes City Council, Parks Trust, Sprytar	Milton Keynes City Council	NO	Not Funded		Implementation			Over 12,000 downloads. Est. 25,000km walked	https://loveexploring.co.uk/
43	BP Pulse electric charging	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2023	2023	Milton Keynes City Council, BP Pulse	Government funding	NO	Funded		Implementation		Number of charge points	25 rapid chargers in CMK, >100 planned in residential areas	https://www.bppulse.co.uk/public-ev-charging
44	StreetCAV project	Promoting Low Emission Transport	Other	2023		Milton Keynes City Council, Smart City Consultancy	Government funding	NO	Funded	£1 million - £10 million	Planning			£2m grant funding secured	https://zenzic.io/cam-supply-chain-uk/streetcav/
45	LivingLAPT project	Promoting Low Emission Transport	Other	2023		MKCC, EIT Urban Motility, University College London, Aurrigo	EIT Urban Mobility	NO	Funded	£1 million - £10 million	Implementation			Trial of vehicle has taken place	https://www.eiturbanmobility.eu/projects/livinglapt-2/
46	Free hopper bus service	Alternatives to private vehicle use		2023	2023	Milton Keynes Council, local bus companies	DfT	NO	Funded		Completed		No. of passengers	Completed	https://www.milton-keynes.gov.uk/highways/bus-rail-and-taxis
47	Bus promotion and fare cap	Public Information	Via leaflets	2023	2024	Milton Keynes City Council	Government funding	NO	Funded		Implementation		Bus usage	Extended to Dec 2024	https://www.milton-keynes.gov.uk/highways/bus-rail-and-taxis

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[6], 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 Environment Act 2021 established a new framework for environmental targets for England. The Environmental Targets (fine particulate matter) (England) Regulations 2023 set targets under this framework for the air pollutant of most harm to health – fine particulate matter (PM2.5). The two targets, both to be met by 2040 are:

- Annual mean concentrations of PM2.5 to be 10 µg m-3 or lower
- Population exposure to PM2.5 to be reduced by 35% compared to 2018 levels

The two targets are designed to work together to drive actions that both reduce concentrations where it is highest and reduce the pollution that everyone in the country experiences. The responsibility for meeting the $PM_{2.5}$ targets sits with national government, but local government, businesses and individuals all have a role to play.

The Public Health Outcomes Framework (PHOF) includes an indicator relating to anthropogenic particulate air pollution, measured as fine particulate matter, $PM_{2.5}$. The indicator is known as D01 (previously 3.01) and the latest value for Milton Keynes is 6.5%, calculated from modelled 2022 data. This is the fraction of annual all-cause adult mortality attributable to $PM_{2.5}$. As a comparison, the value for Central Beds is 6.5% and Luton 7.0%.

It is estimated that UK emissions contribute about 50% of total annual average $PM_{2.5}$, the rest is mainly from European countries, the proportion varying from year to year depending on meteorology; many episodes of high concentration occur on easterly winds. Emissions from diesel engines are a major source of fine particles. In January 2019 the government published the national Clean Air Strategy 2019. This identifies domestic wood and solid fuel burning as a major source of locally derived $PM_{2.5}$ emissions (up to 38%).

Milton Keynes Council is taking the following measures to address $PM_{2.5}$ primarily by reducing emissions from transport and by promoting a more active lifestyle:

- Partnership working to address pollution and health concerns takes place between Environmental Health, Transport Policy, Public Health and Sustainability Departments within the Council. Public health evidence will be implemented to

[6] Defra. Air Quality Strategy – Framework for Local Authority Delivery, August 2023

prevent and minimise impacts of air pollution, including NICE Guideline NG70: Air pollution: outdoor air quality and health (2017) and the Public Health England: Review of interventions to improve outdoor air quality and public health (2019).

- By promoting active travel plans - the "Get Smarter Travel in MK" campaign encourages more sustainable forms of travel such as walking and cycling, moving away from single occupancy vehicles.
- Raising awareness of the effect of air pollution on public health and of the health benefits of more active travel.
- Promoting the use of electric and other low emission vehicles and providing charge points throughout the Borough.
- Improving bus services and providing real time bus passenger information to encourage the use of public transport; Get on Board is a promotional initiative funded by the Department of Transport's Better Bus Area (BBA) fund.
- Procuring electric buses for major routes through the city.
- By adopting a low carbon, more sustainable approach to living in Milton Keynes. By implementing the Sustainability Strategy 2019-2050
- Promoting the use of Eco-design Ready domestic wood burning stoves and distributing leaflets advising how to operate and maintain stoves and the importance of using dry logs.
- Promoting the Ready to Burn fuel certification scheme for Manufactured Solid Fuels (MSF) and wood fuel, to comply with Air Quality (Domestic Solid Fuels Standards) (England) Regulations 2020.

3 Air quality monitoring data and comparison with air quality objectives and national compliance

This section sets out the monitoring undertaken within 2023 by Milton Keynes City Council 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

Milton Keynes City Council undertook automatic (continuous) monitoring at 3 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 Data Archive - Defra, UK page presents PM10, PM2.5 and Ozone automatic monitoring results for Milton Keynes City Council.

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

In March 2023 the MKCC owned FIDAS (particle monitor) joined Defra's Automatic Urban and Rural Network (AURN), this is a network of over 170 sites across the UK. The network allows DEFRA to check statutory air quality standards and targets are being met, identify long term trends in air pollution concentrations, and help to assess the effectiveness of policies to control pollution. In August 2023 the ozone monitor was also taken into the AURN. Now that these two MKCC monitors are part of the AURN, the data can be viewed online at the UK-air website.

3.1.2 Non automatic monitoring sites

Milton Keynes City Council undertook non- automatic (i.e. passive) monitoring of NO_2 at 36 sites 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 in Appendix D. Further details on Quality Assurance/Quality Control (QA/QC) for the diffusion tubes, including bias adjustments and any other adjustments applied (e.g. annualisation and/or distance correction), are included in Appendix C.

3.2 Individual pollutants

The air quality monitoring results presented in this section are, where relevant, adjusted for bias, 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.

There were no exceedences of either the annual or hourly objectives at any monitored location throughout the Borough. For the ninth year running all diffusion tube locations within the former (now revoked) Olney AQMA recorded annual means below the objective. The highest value was 24.2 µg/m^3 recorded at 9 High Street South, Olney. The automatic analyser in Olney recorded an annual mean of 18.11 µg/m^3.

Figure A.1 shows a graph of the annual mean data from the automatic air quality stations. The slightly downward trend at all three monitoring stations since 2000 took an upward turn in 2019, which is most pronounced at the Fixed monitoring station at Civic. This may have been due to initial problems with the new analysers; diffusion tube raw data didn't show the same upward turn that year, as shown in Figure A.2. Monitoring data from 2020 onward shows the NO_2 levels to be back on the slight downward trend, with a very slight rise in Fixed and Roadbox 2 stations in 2023.

3.2.2 Particulate matter (PM_{10})

Table A.6 in Appendix A 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.

There were no exceedances of the annual mean objective and no exceedances of the daily mean objective. The Fixed station at Civic recorded an annual mean concentration of 10.43 µg/m^3, well within the objective. Figure A.3 shows there is a slight downward trend at the stations over the last 10 years that flattens out from 2014 rising again in 2019, with 10 exceedances of the 24-hour mean. As with NO_2 data, the 2020 onwards datasets have reversed this apparent shift and the PM10 annual mean is again showing a downward trend.

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.

The $PM_{2.5}$ annual mean concentration at the Civic Offices in 2023 was 6.67 µg/m^3. With only 5 years of measured $PM_{2.5}$ data it is difficult to draw any trends, however, the readings have decreased from 2019 levels.

3.2.4 Sulphur Dioxide (SO_2)

Automatic monitoring was undertaken between 1999 and 2012. Sulphur dioxide is no longer monitored in Milton Keynes because levels are very low and there are no risks of exceeding air quality objectives.

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)
Fixed	Civic, CMK	Urban Centre	485070	239131	NO_2; PM_{10}; $PM_{2.5}$; O_3	NO	Chemiluminescence; Fidas 200E; UV absorption	113 (to residential)	4.8	3.2
Roadbox 1	Wolverton Road, Newport Pagnell	Roadside	486290	243344	NO_2	NO	Chemiluminescence	25 (to residential)	3.4	1.5
Roadbox 2	High Street South, Olney	Roadside	488922	251157	NO_2	NO	Chemiluminescence	11 (to residential)	2	1.5

Notes:

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

(2) N/A if not applicable

Table 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)
B1, B2	Northampton Rd, Lavendon (Horseshoe PH)	Roadside	491769	253542	NO2	No	0.6	3.0	No	2.1
C1, C2, C3	10 High St South, Olney (Cowper School House)	Roadside	488914	251173	NO2	No	0.0	2.0	No	2.3
D1, D2, D3	9 High St South, Olney (Olney Wine Bar)	Roadside	488904	251177	NO2	No	0.0	1.7	No	2.2
E1, E2, E3	20 High St, Olney	Roadside	488926	251455	NO2	No	3.3	7.6	No	2.2
F1, F2, F3	17 High St, Olney (Opp No.20 High St)	Roadside	488905	251456	NO2	No	0.0	7.2	No	2.1
G1, G2	Corner of Coneygere and Palmers Rd, Olney	Suburban	489108	251213	NO2	No	10.4	1.7	No	2.2
I1, I2	63 High St, Newport Pagnell	Kerbside	487588	243912	NO2	No	2.0	0.4	No	2.4
K1, K2	16-17 Greenlands, Newport Pagnell	Suburban	486296	243208	NO2	No	10.1	1.6	No	2.1
L1, L2	5-7 Greenlands, Newport Pagnell	Suburban	486345	243230	NO2	No	5.4	1.4	No	2.5

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)
M1, M2	42-44 Walnut Close, Newport Pagnell	Suburban	486495	243345	NO2	No	7.6	1.5	No	2.0
N1, N2	222 Wolverton Rd, Blakelands	Suburban	486069	243148	NO2	No	25.0	1.6	No	2.2
O1, O2	64 Nicholas Mead, Great Linford	Urban Background	486039	241484	NO2	No	2.4	4.0	No	1.9
R1, R2, R3	Static Air Quality Station (Civic)	Urban Centre	485070	239131	NO2	No	113.0	4.8	Yes	3.5
S1, S2, S3	Roadbox (Newport Pagnell)	Roadside	486290	243344	NO2	No	25.8	1.8	Yes	2.4
T1, T2	Silbury Boulevard, CMK (corner of North Tenth St)	Kerbside	485298	239126	NO2	No	28.2	0.9	No	2.5
V1, V2	63 Windsor St, Wolverton	Suburban	481412	240860	NO2	No	2.3	1.1	No	2.3
W1, W2	130 Newport Rd, New Bradwell	Roadside	482965	241515	NO2	No	6.1	1.6	No	2.4
AA1, AA2	Brook Farm, Broughton Rd, Middleton	Suburban	489237	239016	NO2	No	23.0	1.0	No	2.1
BB1, BB2	14-16 Newport Rd, Wavendon	Roadside	491498	237284	NO2	No	9.7	7.2	No	1.9

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)
DD1, DD2	Aylesbury St, Fenny Stratford (Bracknell House)	Roadside	488118	233814	NO2	No	11.1	4.5	No	2.4
EE1, EE2	6 Atherstone Court, Two Mile Ash	Suburban	481331	238825	NO2	No	9.5	0.4	No	1.9
FF1, FF2, FF3	Cross Keys Office, High St South, Olney	Roadside	488898	251186	NO2	No	0.2	1.6	No	2.0
HH1, HH2, HH3	Art Mart, 33 High Street South, Olney	Roadside	488891	251248	NO2	No	0.6	2.0	No	2.1
JJ1, JJ2, JJ3	New Roadbox location (Olney)	Roadside	488922	251157	NO2	No	10.1	2.0	Yes	2.1
KK1, KK2, KK3	18/20 Bridge St, Olney	Roadside	488917	251068	NO2	No	0.4	2.2	No	2.2
LL1, LL2, LL3	Courtney House, Bridge St, Olney	Roadside	488909	251077	NO2	No	0.4	1.7	No	2.1
MM1, MM2	18 Wheatcroft Close, Beanhill	Urban Background	486332	236228	NO2	No	10.1	0.3	No	2.2
PP1, PP2	1 Tudor Gardens, Stony Stratford	Suburban	479459	239536	NO2	No	17.0	2.3	No	2.2
QQ1, QQ2	Silver Street, Stony Stratford	Suburban	478740	240217	NO2	No	3.0	0.9	No	2.0
RR1, RR2	Horsefair Green, Stony Stratford	Suburban	478882	240265	NO2	No	3.5	2.6	No	2.0

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) [1]	Distance to kerb of nearest road (m) [2]	Tube Co-located with a Continuous Analyser?	Tube Height (m)
WER1, WER2	97 Water Eaton Road, Bletchley	Roadside	487395	233174	NO2	No	12.0	2.5	No	2.4
AAA1, AAA2	4 Mary Rose, Brooklands	Suburban	489835	240351	NO2	No	4.2	4.8	No	2.0
BBB1, BBB2	267 Fen Street, Brooklands	Roadside	490299	239695	NO2	No	6.0	0.5	No	2.0
CCC1, CCC2	Grovesbrook, Station Road, Bow Brickhill	Roadside	490529	234611	NO2	No	12.2	2.9	No	2.0
DDD1, DDD2	Chapel St/Station Rd, Woburn Sands	Roadside	492923	235716	NO2	No	5.7	2.8	No	2.0
EEE1, EEE2	Miles Close, Blakelands	Suburban	486164	243168	NO2	No	17.3	1.6	No	2.0

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
Fixed	485070	239131	Urban Centre	94.55	94.55	23.5	16.36	16.56	12.41	15.76
Roadbox 1	486290	243344	Roadside	80	80	27.1	24.22	29.67	24.87	17.76
Roadbox 2	488922	251157	Roadside	85.68	85.68	23.9	17.768	18.49	15.96	18.11

☒ **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 NO2 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
B1, B2	491769	253542	Roadside	100	100.0	18.8	14.8	14.5	12.8	10.8
C1, C2, C3	488914	251173	Roadside	100	100.0	36.4	28.5	31.6	26.5	22.9
D1, D2, D3	488904	251177	Roadside	100	100.0	30.9	24.7	33.3	29.1	24.2
E1, E2, E3	488926	251455	Roadside	100	100.0	19.8	17.4	18.3	14.9	13.2
F1, F2, F3	488905	251456	Roadside	100	100.0	25.1	19.6	20.7	17.8	15.0
G1, G2	489108	251213	Suburban	92.3	92.3	11.1	8.8	9.4	7.9	7.0
I1, I2	487588	243912	Kerbside	100	100.0	24.6	23.6	23.6	20.2	17.1
K1, K2	486296	243208	Suburban	100	100.0	20.5	19.3	18.5	16.8	15.4
L1, L2	486345	243230	Suburban	100	100.0	20.7	17.8	17.6	16.0	15.1
M1, M2	486495	243345	Suburban	100	100.0	14.7	13.9	13.5	11.7	11.1
N1, N2	486069	243148	Suburban	90.4	90.4	14.8	16.5	18.3	14.8	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
O1, O2	486039	241484	Urban Background	90.4	90.4	16.3	13.4	14.7	12.0	11.2
R1, R2, R3	485070	239131	Urban Centre	100	100.0	17.1	13.6	14.6	13.1	11.1
S1, S2, S3	486290	243344	Roadside	100	100.0	21.4	22.2	23.8	20.4	18.2
T1, T2	485298	239126	Kerbside	100	100.0	18.3	17.7	21.3	18.3	15.3
V1, V2	481412	240860	Suburban	100	100.0	15.0	11.8	12.8	11.1	9.5
W1, W2	482965	241515	Roadside	92.3	92.3	17.9	16.5	18.0	15.4	13.9
AA1, AA2	489237	239016	Suburban	100	100.0	13.7	12.7	12.9	11.4	9.7
BB1, BB2	491498	237284	Roadside	100	100.0	16.5	13.8	15.0	12.1	10.7
DD1, DD2	488118	233814	Roadside	82.7	82.7	19.8	20.1	22.5	18.4	16.5
EE1, EE2	481331	238825	Suburban	100	100.0	10.6	8.6	9.9	8.4	7.7
FF1, FF2, FF3	488898	251186	Roadside	100	100.0	34.0	27.5	27.7	25.3	21.6
HH1, HH2, HH3	488891	251248	Roadside	100	100.0	27.9	23.1	25.3	20.7	17.1

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
JJ1, JJ2, JJ3	488922	251157	Roadside	100	100.0	18.4	19.9	21.5	16.9	14.9
KK1, KK2, KK3	488917	251068	Roadside	100	100.0	34.7	28.7	31.3	26.8	22.8
LL1, LL2, LL3	488909	251077	Roadside	100	100.0	29.6	25.1	26.6	21.8	19.2
MM1, MM2	486332	236228	Urban Background	100	100.0	19.0	20.3	21.7	20.0	15.7
PP1, PP2	479459	239536	Suburban	100	100.0	10.3	7.8	8.5	6.7	6.4
QQ1, QQ2	478740	240217	Suburban	100	50.0	14.9	13.3	13.7	11.5	11.8
RR1, RR2	478882	240265	Suburban	100	100.0	19.2	16.9	17.4	14.4	13.2
WER1, WER2	487395	233174	Roadside	100	100.0	17.9	18.8	19.5	15.6	14.6
AAA1, AAA2	489835	240351	Suburban	100	100.0	17.8	15.9	16.2	13.5	12.1
BBB1, BBB2	490299	239695	Roadside	100	100.0	19.1	17.6	19.1	16.9	14.4
CCC1, CCC2	490529	234611	Roadside	100	100.0	13.4	12.7	12.6	10.4	9.5
DDD1, DDD2	492923	235716	Roadside	100	100.0	15.1	12.0	12.0	10.3	9.4

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
EEE1, EEE2	486164	243168	Suburban	100	100.0	14.8	17.5	17.8	15.1	13.9

☒ **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

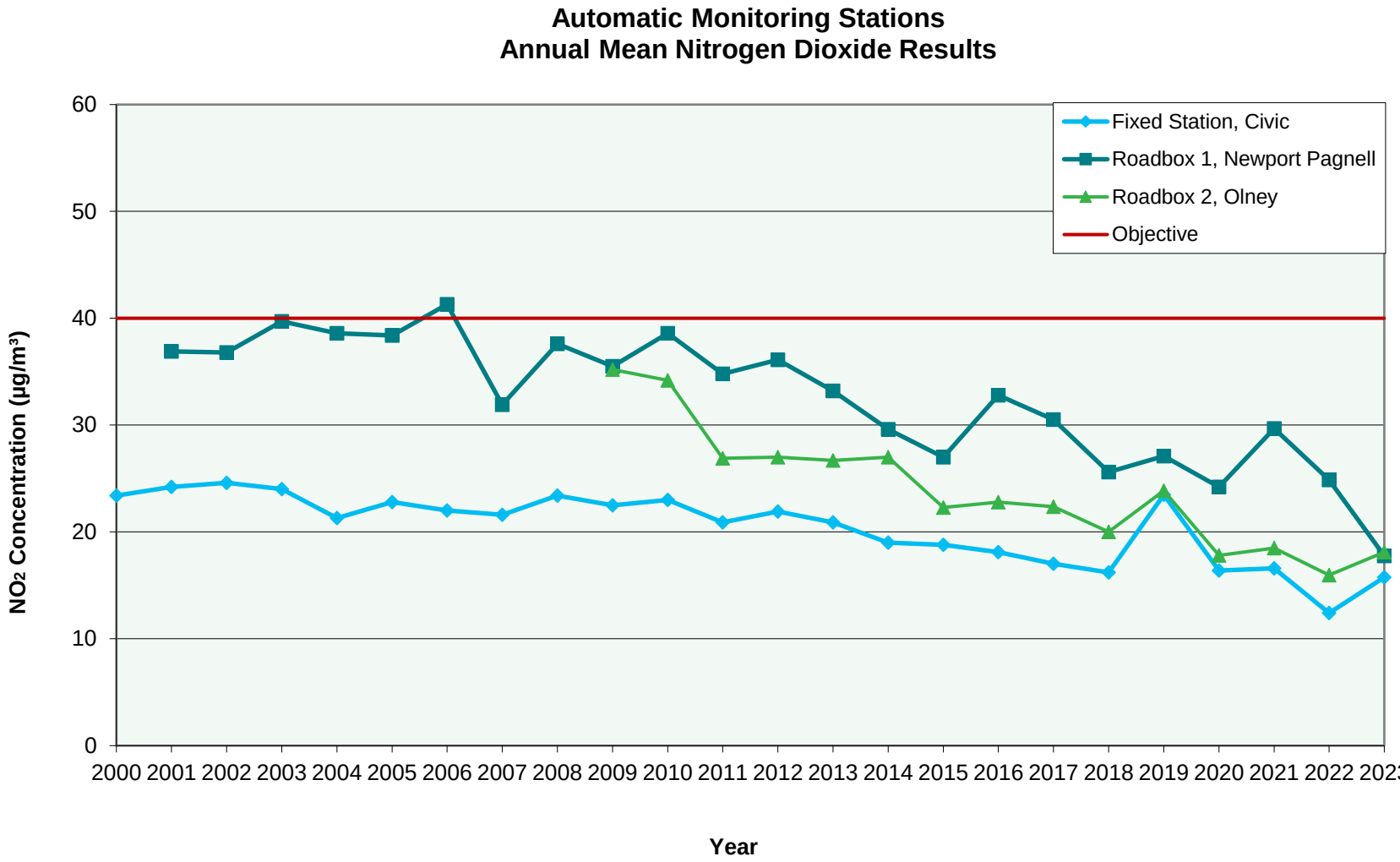


Table A.5 - 1-Hour Mean NO_2 Monitoring Results, Number of 1-Hour Means > 200µg/m^3

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
Fixed	485070	239131	Urban Centre	94.55	94.55	0	0	0	0	0
Roadbox 1	486290	243344	Roadside	80	80	0	0	0	0	0 (71.9)
Roadbox 2	488922	251157	Roadside	85.68	85.68	0	0	0	0 (64.6)	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 annual mean NO2 concentrations in diffusion tubes

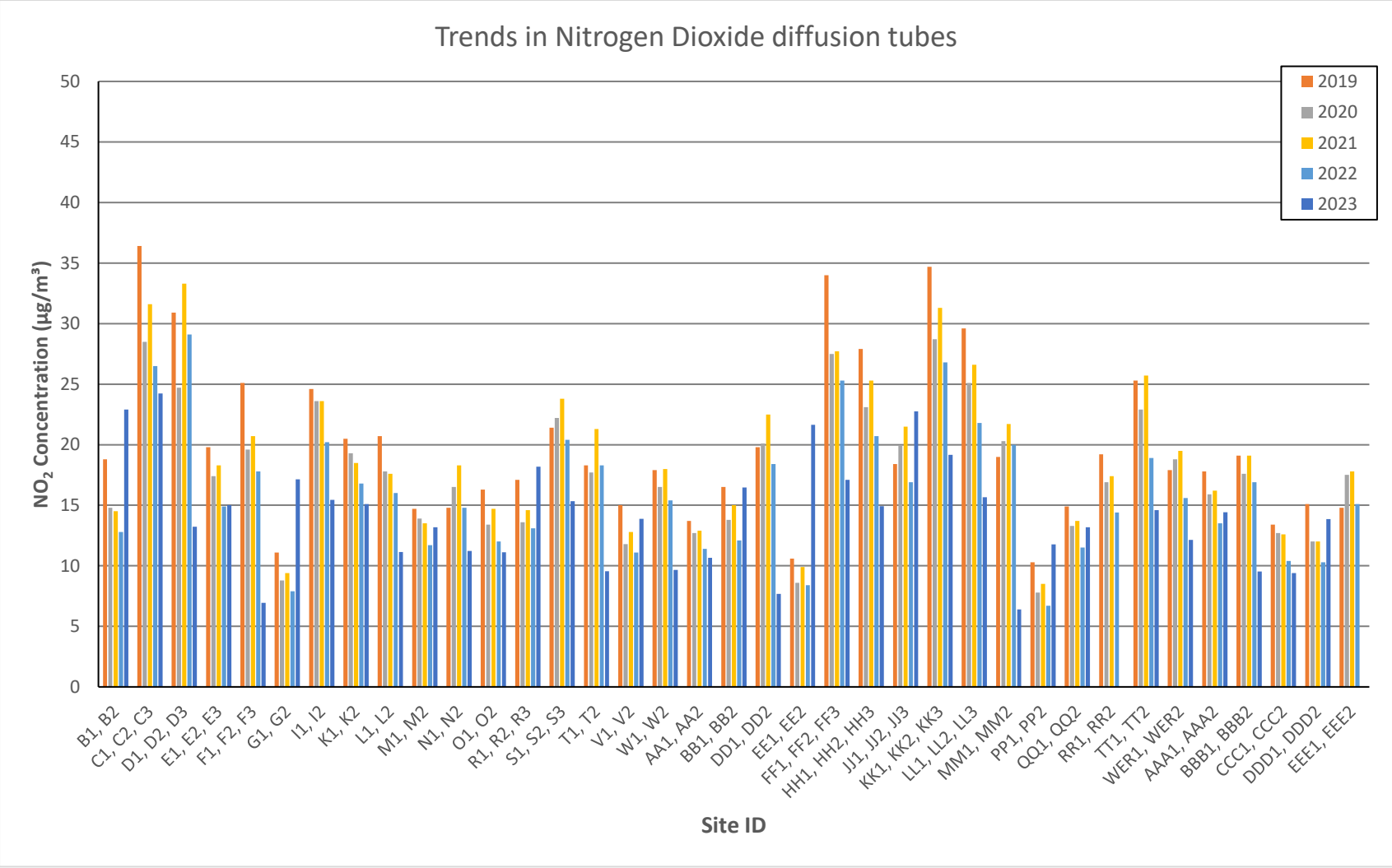


Table A.6 – Annual mean PM_{10} monitoring results ($\mu g/m^3$)

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
Fixed	485070	239131	Urban Centre	99.85	99.85	16.06	11.7	11.6	12.41	10.43

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

Notes:

The annual mean concentrations are presented as $\mu g/m^3$.
Exceedances of the PM_{10} annual mean objective of 40$\mu g/m^3$ 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

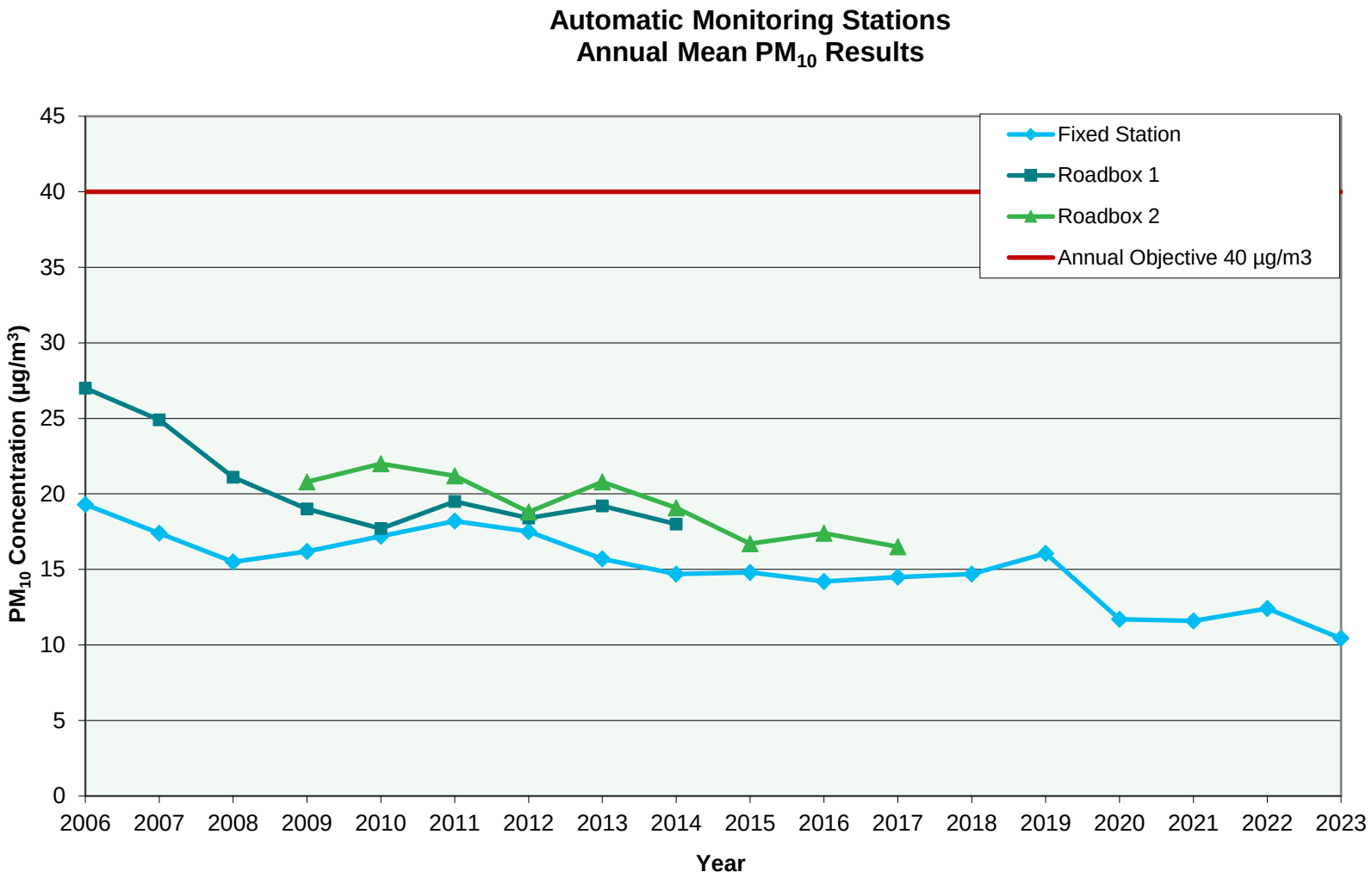


Table A.7 - 24-Hour mean PM_{10} monitoring results, number of PM_{10} 24-hour means > 50µg/m^3

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
Fixed	485070	239131	Urban Centre	99.85	99.85	10	0	1	1	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/m^3

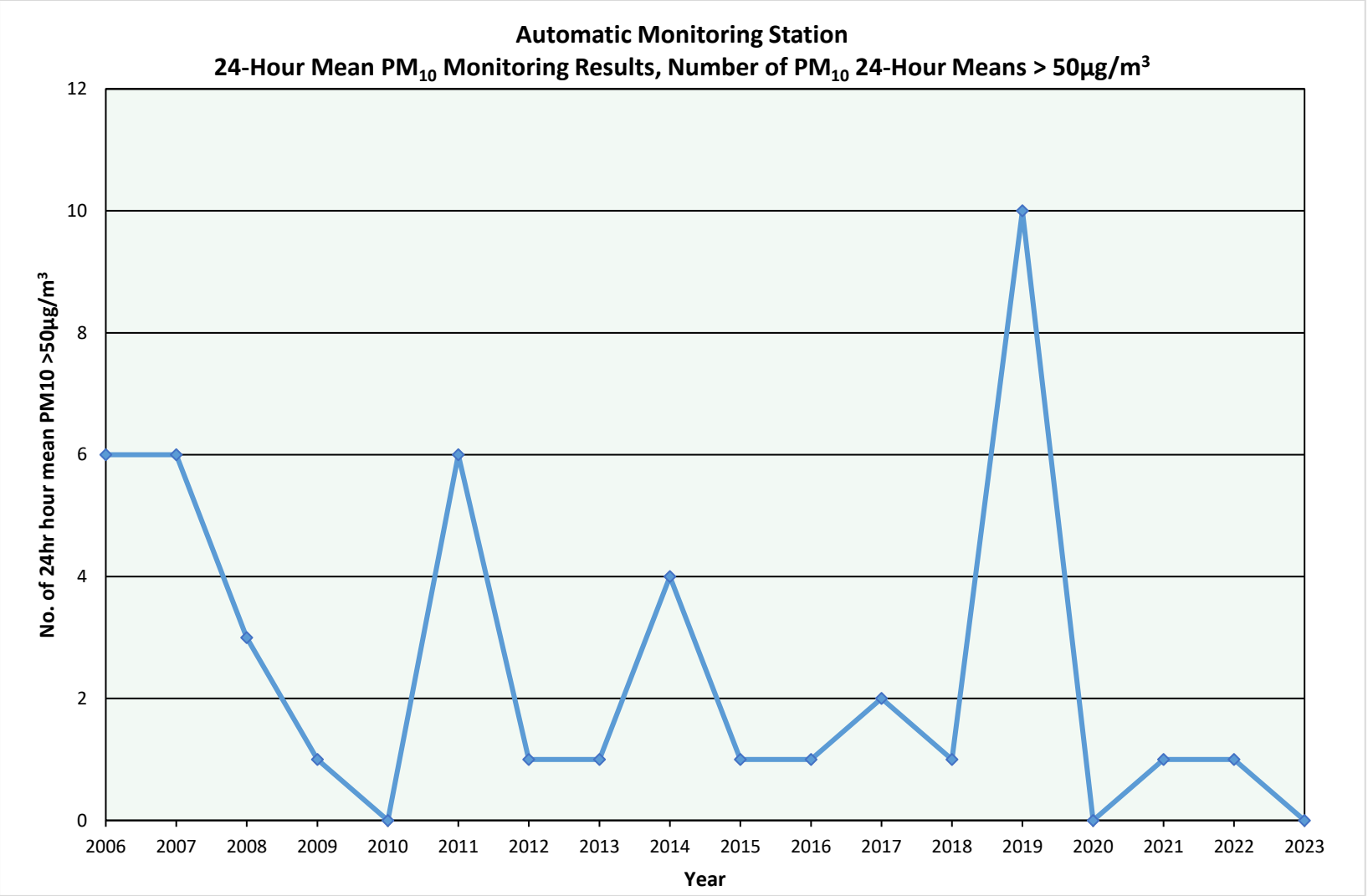


Table A.8 – Annual mean $PM_{2.5}$ monitoring results ($\mu g/m^3$)

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
Fixed	485070	239131	Urban Centre	99.85	99.85	11.2	7.56	7.88	8.18	6.67

☒ **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

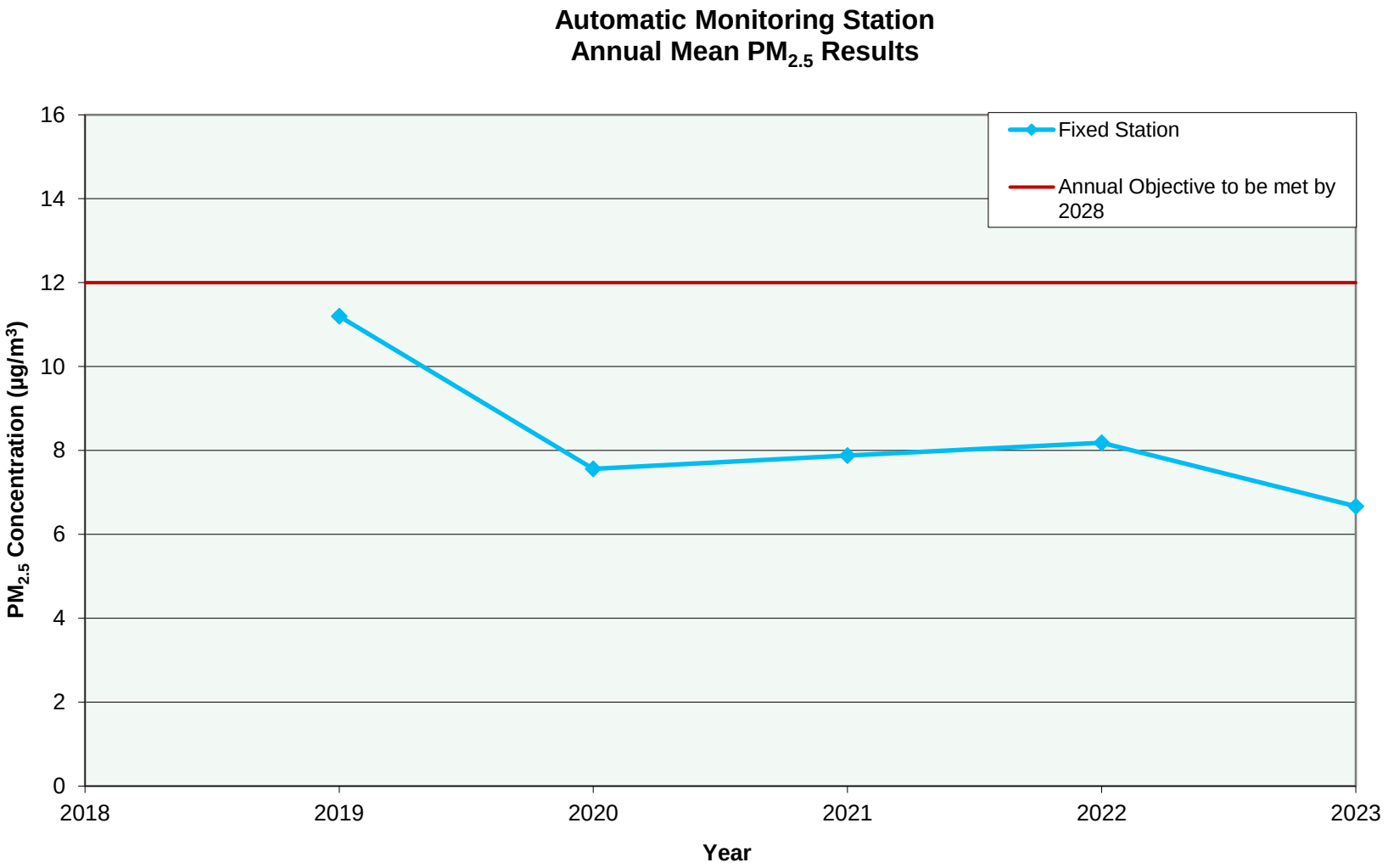


Table A.9 – Annual mean daily max of 8 hour running mean O_3 monitoring results (µg/m^3)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2022 (%) (2)	2019	2020	2021	2022	2023
Fixed	485070	239131	Urban Centre	92.2	92.2	59.43	61.58	60.44	64.77	64.65

Notes:

The annual mean concentrations are presented as µg/m3.
If the period of valid data is less than 85%, the relevant percentiles are 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.6 – Trends in daily max running 8hr mean O_3 concentrations

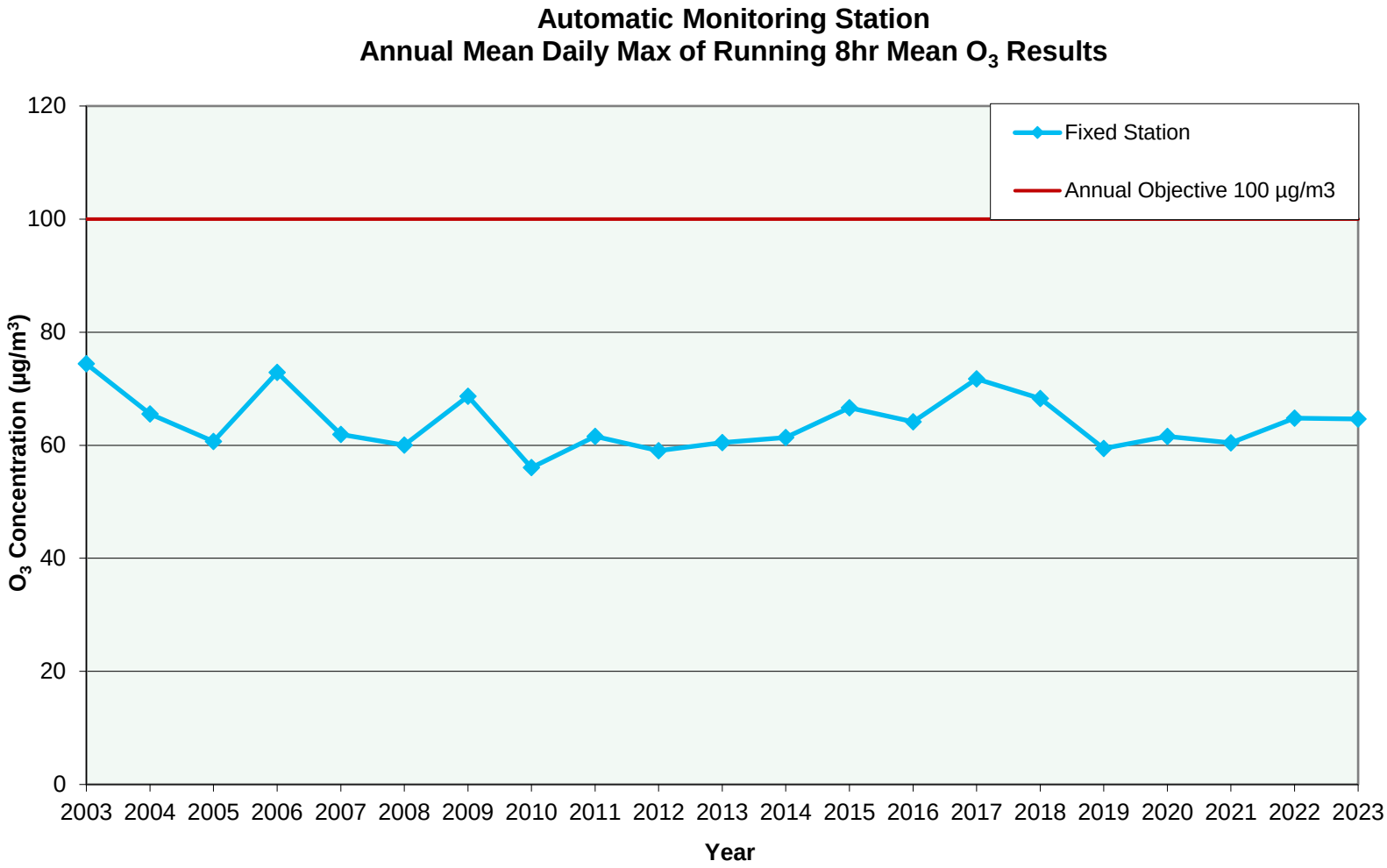
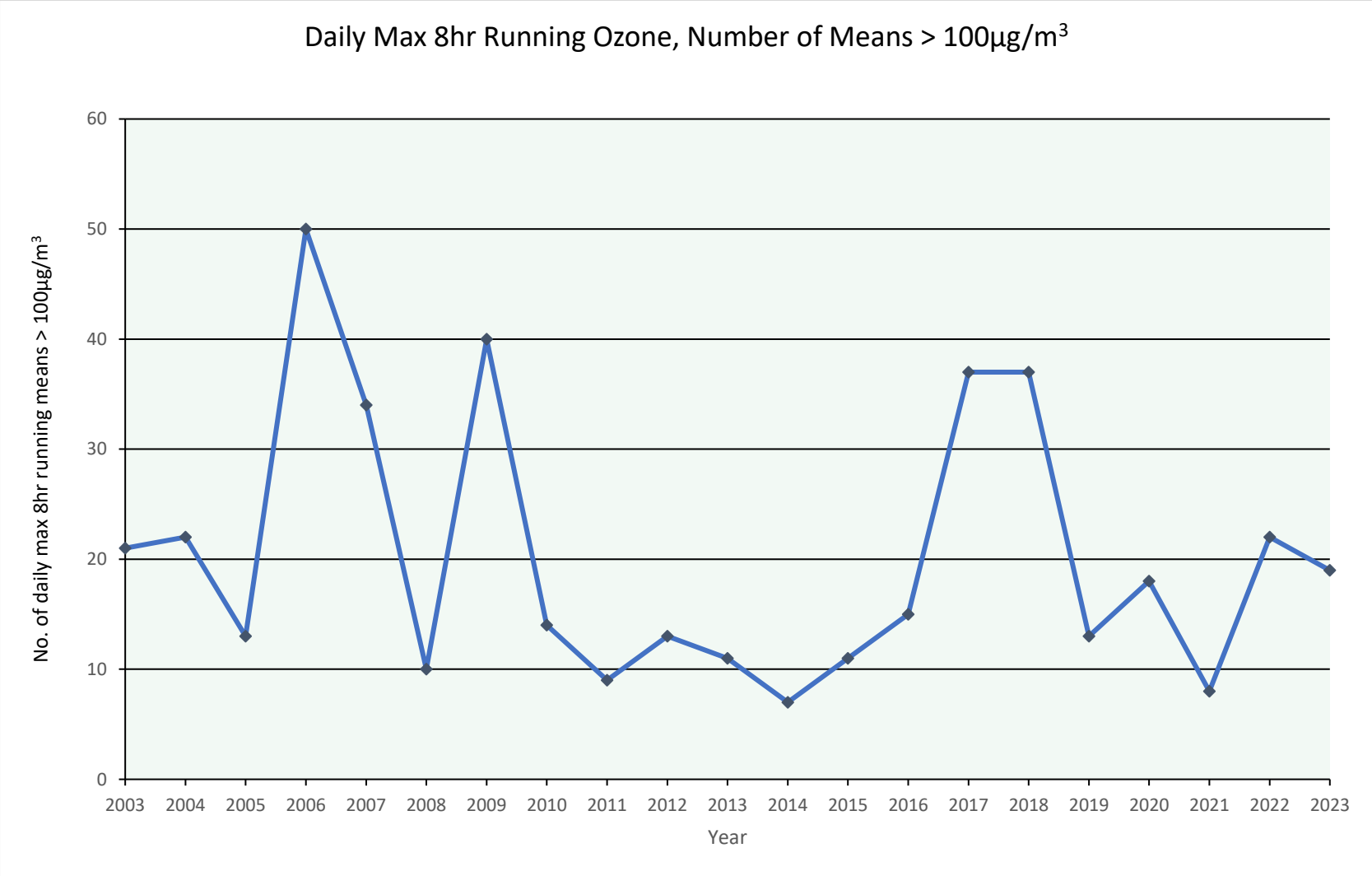


Table A.10 – Daily max 8hr running mean O_3 monitoring results, number of means > 100µg/m^3

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2022 (%) (2)	2019	2020	2021	2022	2023
Fixed	485070	239131	Urban Centre	92.2	92.2	13	18	8	22	19

Figure A.7 – Trends in number of daily max 8hr running mean O_3 > 100µg/m^3



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 <(0.72)>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
B1	491769	253542	17.3	18.7	17.2	17.7	9.4	9.2	10.5	12.0	14.9	15.1	16.9	15.4	-	-	-	Duplicate Site with B1 and B2 - Annual data provided for B2 only
B2	491769	253542	21.1	23.2		15.5	9.4	10.2	11.9	11.2	14.1	14.2	20.8	16.9	15.0	10.8	-	Duplicate Site with B1 and B2 - Annual data provided for B2 only
C1	488914	251173	36.4	36.1	27.0	31.9	37.7	34.2	24.2	30.0	35.6	32.0	32.0	23.0	-	-	-	Triplicate Site with C1, C2 and C3 - Annual data provided for C3 only
C2	488914	251173	32.5	40.7	32.2	32.6	33.1	35.5	21.8	29.3	36.2	35.1	34.2	22.5	-	-	-	Triplicate Site with C1, C2 and C3 - Annual data provided for C3 only
C3	488914	251173	35.3	36.4	28.6	34.6	34.7	34.4	23.1	29.1	35.3	31.7	31.4	24.6	31.8	22.9	-	Triplicate Site with C1, C2 and C3 - Annual data provided for C3 only
D1	488904	251177	41.1	39.6	36.2	36.7	33.6	28.8	33.4	30.6	40.0	34.3	30.7	23.2	-	-	-	Triplicate Site with D1, D2 and D3 - Annual data provided for D3 only
D2	488904	251177	38.3	44.4	32.0	34.6	25.9	29.5	32.0	29.7	39.7	34.1	34.0	23.7	-	-	-	Triplicate Site with D1, D2 and D3 - Annual data provided for D3 only
D3	488904	251177	44.2	38.6	35.5	35.2	26.5	30.4	31.3	34.6	41.0	35.8		20.5	33.7	24.2	-	Triplicate Site with D1, D2 and D3 - Annual data provided for D3 only
E1	488926	251455	20.0	23.5	19.5	20.2	18.4	19.0	11.6	13.9	18.8	20.8	20.6	14.8	-	-	-	Triplicate Site with E1, E2 and E3 - Annual data provided for E3 only
E2	488926	251455	20.3	22.7	16.6	19.2	19.4	16.2	11.6	15.8	19.3	19.6	22.2	13.3	-	-	-	Triplicate Site with E1, E2 and E3 - Annual data provided for E3 only
E3	488926	251455	22.3	21.9	21.0	22.1	18.0	13.5	13.8	13.6	20.0	20.4	21.5	15.8	18.4	13.2	-	Triplicate Site with E1, E2 and E3 - Annual data provided for E3 only
F1	488905	251456	25.6	27.9	19.4	17.8	14.6	13.7	19.4	18.3	22.9	21.5	23.5	20.1	-	-	-	Triplicate Site with F1, F2 and F3 - Annual data provided for F3 only
F2	488905	251456	27.5	26.0	18.8	16.4	18.7	14.3	19.1	22.5	22.4	23.3	22.2	18.7	-	-	-	Triplicate Site with F1, F2 and F3 - Annual data provided for F3 only
F3	488905	251456	23.9	27.5	21.9	19.5	15.3	15.2	19.1	22.5	22.1	22.5	27.8	18.8	20.9	15.0	-	Triplicate Site with F1, F2 and F3 - Annual data provided for F3 only
G1	489108	251213	15.6	10.3	8.3	6.9	4.3	7.5	4.8	6.0		10.9	16.6	11.1	-	-	-	Duplicate Site with G1 and G2 - Annual data provided for G2 only
G2	489108	251213	13.0	13.4	11.2	9.0	5.0	4.7	9.4	7.6		12.4	14.0	10.4	9.7	7.0	-	Duplicate Site with G1 and G2 - Annual data provided for G2 only
I1	487588	243912	28.3	32.7	23.3	22.2	16.6	15.8	20.4	20.0	25.4	26.6	25.2	23.3	-	-	-	Duplicate Site with I1 and I2 - Annual data provided for I2 only

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 <(0.72)>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
I2	487588	243912	30.7	30.6	22.2	21.4	19.3	17.0	20.7	20.5	28.0	28.8	27.9	24.5	23.8	17.1	-	Duplicate Site with I1 and I2 - Annual data provided for I2 only
K1	486296	243208	25.4	30.0	22.1	19.8	13.9	12.5	20.1	22.2	25.2	23.7	24.1	23.6	-	-	-	Duplicate Site with K1 and K2 - Annual data provided for K2 only
K2	486296	243208	26.8	27.7	18.6	15.1	12.7	12.7	18.4	20.1	24.3	24.6	28.0	23.3	21.5	15.4	-	Duplicate Site with K1 and K2 - Annual data provided for K2 only
L1	486345	243230	27.5	28.5	23.4	19.7	11.1	10.6	19.4	20.5	23.8	22.7	26.8	21.7	-	-	-	Duplicate Site with L1 and L2 - Annual data provided for L2 only
L2	486345	243230	25.6	28.7	20.9	15.5	11.4	10.3	19.0	18.3	22.8	21.6	30.8	22.5	21.0	15.1	-	Duplicate Site with L1 and L2 - Annual data provided for L2 only
M1	486495	243345	22.1	20.8	14.9	10.5	11.1	6.7	11.0	11.6	18.0	18.2	18.5	16.3	-	-	-	Duplicate Site with M1 and M2 - Annual data provided for M2 only
M2	486495	243345	22.3	21.7	17.3	12.4	9.4		13.1	15.8	18.1	17.8	19.9	17.1	15.5	11.1	-	Duplicate Site with M1 and M2 - Annual data provided for M2 only
N1	486069	243148	22.2	28.1	17.1	20.8	18.4		9.9	14.9	17.0	16.9	21.8	15.4	-	-	-	Duplicate Site with N1 and N2 - Annual data provided for N2 only
N2	486069	243148	23.2	25.7	19.4	19.2	16.5		11.8	14.5	16.6	17.9	20.0		18.3	13.2	-	Duplicate Site with N1 and N2 - Annual data provided for N2 only
O1	486039	241484	18.6	22.2	14.3	13.8	8.7		9.1	11.3	16.8	16.9	20.3	16.0	-	-	-	Duplicate Site with O1 and O2 - Annual data provided for O2 only
O2	486039	241484	19.1	19.7	14.6	17.5	11.6		9.6	11.7	18.6	18.1	17.7	16.8	15.6	11.2	-	Duplicate Site with O1 and O2 - Annual data provided for O2 only
R1	485070	239131	20.0	21.9	16.9	15.7	10.6	5.3	8.9	12.5	15.5	18.1	22.6	13.9	-	-	-	Triplicate Site with R1, R2 and R3 - Annual data provided for R3 only
R2	485070	239131	23.1	22.0	14.5	13.0	10.5	8.4	9.8	12.5	15.5	19.1	20.8	14.7	-	-	-	Triplicate Site with R1, R2 and R3 - Annual data provided for R3 only
R3	485070	239131	22.5	20.0	16.5	17.3	11.4	7.5	12.7	11.3	16.7	17.6	20.5	15.9	15.4	11.1	-	Triplicate Site with R1, R2 and R3 - Annual data provided for R3 only
S1	486290	243344	30.2	33.5	23.6	17.7	20.1	17.7	22.2	22.9	25.9	27.9	31.1	26.1	-	-	-	Triplicate Site with S1, S2 and S3 - Annual data provided for S3 only
S2	486290	243344	28.4	32.5	23.7	23.6	24.2	17.6	24.0	22.7	28.7	32.7	30.6	24.3	-	-	-	Triplicate Site with S1, S2 and S3 - Annual data provided for S3 only
S3	486290	243344	27.9	29.5	25.5	25.7	21.4	20.7	20.8	24.8	25.9	24.7	28.9	22.0	25.3	18.2	-	Triplicate Site with S1, S2 and S3 - Annual data provided for S3 only
T1	485298	239126	28.9	24.7	24.1	20.8	18.1	12.9	14.5	19.0	24.0	21.3	27.8	18.7	-	-	-	Duplicate Site with T1 and T2 - Annual data provided for T2 only
T2	485298	239126	28.6	21.4	20.8	21.2	17.0	10.4	17.9	20.6	24.8	24.9	27.1	21.4	21.3	15.3	-	Duplicate Site with T1 and T2 - Annual data provided for T2 only
V1	481412	240860	15.0	22.6	11.6	15.2	11.1	7.4	7.9	10.0	12.7	14.6	18.5	13.4	-	-	-	Duplicate Site with V1 and V2 - Annual data provided for V2 only

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 <(0.72)>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
V2	481412	240860	17.6	18.5	12.5	14.3	13.5	6.8	6.6	6.6	13.0	15.8	23.2	9.9	13.3	9.5	-	Duplicate Site with V1 and V2 - Annual data provided for V2 only
W1	482965	241515	26.1	21.2	20.0	20.9		13.3	12.5	19.2	20.8	17.4	21.5	13.0	-	-	-	Duplicate Site with W1 and W2 - Annual data provided for W2 only
W2	482965	241515	27.1	24.4	19.0	19.2		11.0	14.8	16.6	23.9	21.4	24.2	16.8	19.3	13.9	-	Duplicate Site with W1 and W2 - Annual data provided for W2 only
AA1	489237	239016	22.1	18.4	15.1	15.8	9.5	9.4	11.0	11.3	13.7	15.3	17.7	13.4	-	-	-	Duplicate Site with AA1 and AA2 - Annual data provided for AA2 only
AA2	489237	239016	20.1	22.2	12.5	10.6	0.5	5.7	7.4	10.2	12.9	14.3	19.0	14.0	13.4	9.7	-	Duplicate Site with AA1 and AA2 - Annual data provided for AA2 only
BB1	491498	237284	19.9	18.6	12.5	14.5	14.2	9.5	10.6	11.9	13.6	17.0	18.9	12.5	-	-	-	Duplicate Site with BB1 and BB2 - Annual data provided for BB2 only
BB2	491498	237284	19.2	20.8	15.4	19.9	13.4	11.7	8.5	13.0	12.7	16.0	18.3	12.5	14.8	10.7	-	Duplicate Site with BB1 and BB2 - Annual data provided for BB2 only
DD1	488118	233814	30.2	34.4	20.8	21.8	20.4		15.3	17.4	25.4		24.6	19.8	-	-	-	Duplicate Site with DD1 and DD2 - Annual data provided for DD2 only
DD2	488118	233814	31.7	32.1	24.8	20.7	16.5		17.1	18.9	23.2		21.2	21.2	22.9	16.5	-	Duplicate Site with DD1 and DD2 - Annual data provided for DD2 only
EE1	481331	238825	12.9	19.7	9.8	11.3	6.7	5.5	7.0	7.2	8.0	13.3	13.5	12.1	-	-	-	Duplicate Site with EE1 and EE2 - Annual data provided for EE2 only
EE2	481331	238825	14.9	17.4	10.5	8.2	10.9	6.4	6.4	8.4	9.0	12.7	13.7	10.5	10.7	7.7	-	Duplicate Site with EE1 and EE2 - Annual data provided for EE2 only
FF1	488898	251186	33.3	35.2	29.7	30.3	22.8	20.2	27.5	30.8	39.0	33.0	30.9	33.2	-	-	-	Triplicate Site with FF1, FF2 and FF3 - Annual data provided for FF3 only
FF2	488898	251186	35.3	35.6	31.1	22.5	23.2	17.0	28.5	29.7	36.1	34.7	32.7	28.2	-	-	-	Triplicate Site with FF1, FF2 and FF3 - Annual data provided for FF3 only
FF3	488898	251186	30.4	35.2	26.9	30.1	21.5	22.9	33.2	27.2	39.3	34.6	31.1	29.1	30.1	21.6	-	Triplicate Site with FF1, FF2 and FF3 - Annual data provided for FF3 only
HH1	488891	251248	26.9	33.7	23.2	23.1	22.8	17.5	21.6	21.7	26.8	22.1	29.0	21.8	-	-	-	Triplicate Site with HH1, HH2 and HH3 - Annual data provided for HH3 only
HH2	488891	251248	26.4	27.5	24.7	22.2	19.7	18.7	21.2	23.0	24.9	20.8	26.4	19.8	-	-	-	Triplicate Site with HH1, HH2 and HH3 - Annual data provided for HH3 only
HH3	488891	251248	30.1	30.8	22.3	25.2	19.8	18.2	20.3	25.2	26.6	23.4	28.3	19.4	23.8	17.1	-	Triplicate Site with HH1, HH2 and HH3 - Annual data provided for HH3 only
JJ1	488922	251157	25.3	26.0	21.0	21.5	13.4	15.9	16.1	18.3	23.8	20.1	24.0	16.7	-	-	-	Triplicate Site with JJ1, JJ2 and JJ3 - Annual data provided for JJ3 only

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 <(0.72)>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
JJ2	488922	251157	23.8	26.0	21.1	25.2	19.5	17.7	18.8	17.5	23.0	24.8	24.3	15.1	-	-	_	Triplicate Site with JJ1, JJ2 and JJ3 - Annual data provided for JJ3 only
JJ3	488922	251157	22.6	28.7	19.7	15.7	18.5	17.2	16.4	17.3	21.8	24.6	25.2	19.9	20.7	14.9	_	Triplicate Site with JJ1, JJ2 and JJ3 - Annual data provided for JJ3 only
KK1	488917	251068	32.7	35.4	32.0	30.9	32.1	29.0	27.5	25.1	38.5	37.1	32.1	25.1	-	-	_	Triplicate Site with KK1, KK2 and KK3 - Annual data provided for KK3 only
KK2	488917	251068	31.7	36.1	34.1	37.9	30.4	29.1	28.3	27.9	35.4	37.0	32.7	26.4	-	-	_	Triplicate Site with KK1, KK2 and KK3 - Annual data provided for KK3 only
KK3	488917	251068	34.5		31.8	33.0	26.4	27.4	28.0	25.7	37.1	35.2	32.7	25.6	31.6	22.8	_	Triplicate Site with KK1, KK2 and KK3 - Annual data provided for KK3 only
LL1	488909	251077	37.3	32.9	27.5	25.8	21.1	18.6	29.4	23.5	32.4	26.3	28.5	24.8	-	-	_	Triplicate Site with LL1, LL2 and LL3 - Annual data provided for LL3 only
LL2	488909	251077	32.7	32.4	23.8	23.3	21.7	19.5	26.9	19.5	27.3	27.7	31.7	25.4	-	-	_	Triplicate Site with LL1, LL2 and LL3 - Annual data provided for LL3 only
LL3	488909	251077	32.6	30.7	24.2	23.6	23.2	18.1	27.4	25.8	30.3	28.8	27.6	25.5	26.6	19.2	_	Triplicate Site with LL1, LL2 and LL3 - Annual data provided for LL3 only
MM1	486332	236228	30.2	30.9	24.3	22.1	17.5	11.5	8.2	20.4	23.6	24.3	24.2	19.5	-	-	_	Duplicate Site with MM1 and MM2 - Annual data provided for MM2 only
MM2	486332	236228	30.1	33.9	22.0	21.0	18.1	12.9	14.4	19.8	22.0	22.8	28.5	19.7	21.7	15.7	_	Duplicate Site with MM1 and MM2 - Annual data provided for MM2 only
PP1	479459	239536	12.2	10.2	9.3	10.2	8.9	7.2	7.1	7.2	8.6	8.9	11.3	6.7	-	-	_	Duplicate Site with PP1 and PP2 - Annual data provided for PP2 only
PP2	479459	239536	9.7	15.0	7.4	8.0	8.3	5.8	5.4	5.3	6.4	9.9	15.1	9.0	8.9	6.4	_	Duplicate Site with PP1 and PP2 - Annual data provided for PP2 only
QQ1	478740	240217	13.1	18.1	13.8	15.1	15.2	27.3							-	-	_	Duplicate Site with QQ1 and QQ2 - Annual data provided for QQ2 only
QQ2	478740	240217	12.9	16.6	15.1	18.2	14.0	29.0							17.4	11.8	_	Duplicate Site with QQ1 and QQ2 - Annual data provided for QQ2 only
RR1	478882	240265	21.2	23.5	16.0	19.0	18.1	14.0	13.0	17.8	20.8	22.6	11.5	15.1	-	-	_	Duplicate Site with RR1 and RR2 - Annual data provided for RR2 only
RR2	478882	240265	19.4	23.1	19.9	23.3	16.1	17.4	13.4	18.1	19.7	24.8	18.5	13.4	18.3	13.2	_	Duplicate Site with RR1 and RR2 - Annual data provided for RR2 only
WER1	487395	233174	33.1	33.6	19.3	15.9	16.4	13.4	17.1	15.7	20.2	20.1	28.5	18.4	-	-	_	Duplicate Site with WER1 and WER2 - Annual data provided for WER2 only

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 <(0.72)>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
WER2	487395	233174	25.9	25.4	16.5	15.8	15.3		16.6	13.1	21.6	24.9	25.6	20.5	20.3	14.6	_	Duplicate Site with WER1 and WER2 - Annual data provided for WER2 only
AAA1	489835	240351	24.4	23.8	18.5	17.9	16.1	12.5	11.4	11.6	14.4	20.7	21.4	17.0	-	-	_	Duplicate Site with AAA1 and AAA2 - Annual data provided for AAA2 only
AAA2	489835	240351	21.7	25.0	16.2	16.1	13.6	12.5	9.7	11.6	16.7	20.8	18.2	12.9	16.9	12.1	_	Duplicate Site with AAA1 and AAA2 - Annual data provided for AAA2 only
BBB1	490299	239695	30.2	25.3	21.6	19.0	17.4	13.7	11.0	16.4	19.3	24.9	31.6	16.0	-	-	_	Duplicate Site with BBB1 and BBB2 - Annual data provided for BBB2 only
BBB2	490299	239695	27.4	26.9	18.4	15.0	14.5	13.0	11.7	16.8	21.2	24.8	26.1	18.9	20.0	14.4	_	Duplicate Site with BBB1 and BBB2 - Annual data provided for BBB2 only
CCC1	490529	234611	17.1	17.6	12.7	11.1	14.1	7.0	10.5	9.7	12.9	13.9	16.9	11.0	-	-	_	Duplicate Site with CCC1 and CCC2 - Annual data provided for CCC2 only
CCC2	490529	234611	16.2	20.5	17.1	13.1	10.9	9.5	9.7	7.9		13.7	17.3	14.4	13.2	9.5	_	Duplicate Site with CCC1 and CCC2 - Annual data provided for CCC2 only
DDD1	492923	235716	16.3	20.7	12.0	13.0	9.8	9.5	8.2	9.4	11.7	15.2	14.6	9.8	-	-	_	Duplicate Site with DDD1 and DDD2 - Annual data provided for DDD2 only
DDD2	492923	235716	17.3	19.1	13.6	14.4	10.0	10.0	8.5	13.4	13.9	17.7	16.0	9.3	13.1	9.4	_	Duplicate Site with DDD1 and DDD2 - Annual data provided for DDD2 only
EEE1	486164	243168	19.2	25.4	17.1	25.0	22.7	23.2	10.0	17.6	17.5	19.8	19.8	13.9	-	-	_	Duplicate Site with EEE1 and EEE2 - Annual data provided for EEE2 only
EEE2	486164	243168	19.4	22.2	17.8	21.5	27.1	22.7	13.7	15.4	18.9	20.2	20.0	11.8	19.2	13.9	_	Duplicate Site with EEE1 and EEE2 - Annual data provided for EEE2 only

☒ **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**

☒ **National bias adjustment factor used**

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

☒ **Milton Keynes City 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 Milton Keynes City Council During 2023

Table C.1 and Table C.2 contain details of new developments with planning permission and new developments that have applied for planning permission but have not yet been approved, that have a potential to impact air quality in Milton Keynes.

Table C.1 – New developments with planning permission

Application Type	Application No:	Location	Proposal	Date of Decision	Progress
Strategic Urban Extension. Residential & Mixed Development	21/00999/OUTEIS	Eastern Expansion Area. East of M1 and London Road, Moulsoe	Approx 5000 dwellings, employment, secondary school and primary school, health hub and linear park	10 February 2022	Under Construction.
Extension of operational life of Landfill	22/02874/NMA	FCC - Bletchley Landfill, Guernsey Road, Newton Leys, MK3 5FR	Extended operational life for a further 15 years	24 February 2023	Operational
Residential development	14/00350/OUTEIS	Former Wavendon Golf Centre, Lower End Road, Wavendon, MK17 8DA	Up to 350 residential Dwellings	2 February 2015	Under Construction - Nearing completion
Residential development	14/02167/OUTEIS	Land west of Eagle Farm South, South of A421, North of Lower End Farm, Wavendon	Up to 385 residential dwellings	2 April 2015	Under construction – Nearing completion
Residential development	20/01176/OUT	Land off Timbold Drive, Kents Hill	Up to 171 Dwellings and retail	11 December 2020	Under Construction
Strategic Urban Extension. Residential & Mixed Development	20/00133/OUTEIS	Tickford Fields Farm, North Crawley Road	Up to 930 residential dwellings, Primary School, Local centre with retail and community centre.	28 May 2021	Application Permitted

Application Type	Application No:	Location	Proposal	Date of Decision	Progress
Sand and Gravel Extraction	18/00009/MIN	Land to North and East of Lathbury, Northampton Road, Lathbury,	Sand and Gravel Extraction and restoration by the importation of inert waste.	20 August 2020	Operational
Screening request for EIA	23/00080/EIASCR	Land to North and East of Lathbury, Northampton Road, Lathbury,	Screening request under EIA relating to two extensions to Sand and gravel extraction area	12 Feb 2023	EIA Required
Residential development	17/00939/OUT	Land west of Yardley Road, Olney	Up to 250 dwellings	31 July 2018	Under construction, nearing completion
Commercial Development	17/03335/OUT	Land off Warrington Road, Olney	Offices, light industrial, retail, storage and distribution, hotel, car facility and car showroom.	17 December 2021	Under Construction - Nearing completion
Strategic Urban Expansion Residential and Mixed Development	06/00123/MKPCO	Western Expansion Area, Watling Street, Fairfields	Approximately 2200 dwellings, Range of Employment, Primary School and Local Centre	15 October 2007	Under construction – nearing completion
Strategic Urban Expansion Residential and Mixed Development	05/00291/MKPCO	Western Expansion Area, Watling Street, Whitehouse	Approximately 4320 residential units, a range employment classes, a secondary school, 3 primary schools and mixed use centre.	5 October 2007	Under construction – nearing completion
Warehousing and distribution	21/02442/OUTEIS	Caldecote Farm, Willen Road, Newport Pagnell.	Storage and distribution, use class B6.	2 September 2022	Under Construction
Residential and mixed use	21/002246/FULEIS	Saxon Court 502 Avebury Boulevard, Central Milton Keynes	Two blocks up to 34 storeys to provide up to 288 residential units, office employment,	8 September 2022	Application Permitted

Application Type	Application No:	Location	Proposal	Date of Decision	Progress
			restaurant, café and retail space		
Residential and mixed use	19/02804/OUT	Food Centre, Land bounded by Midsummer Boulevard, Secklow Gate. Lower 12th Steet and Avebury Boulevard, MK9 3BQ	4 blocks providing 422 residential units, hybrid building and flexible ground floor uses	25 June 2020	Application Permitted: Demolition and Infrastructure under construction
Redevelopment of site for residential, commercial and community units	20/03293/FUL	Land at the Agora Centre, Church Street, Wolverton	115 new homes, Co-housing Common House nine ground floor commercial and community units of approximately 1000m^2	22 December 2021	Under construction
Residential	22/03201/OUT	Land to West of Walton Manor, Brickhill Street	174 residential dwellings and community space	30 August 2023	Application permitted
Screening request for EIA	23/00620/EIASCR/ 23/01634/FUL	599 Grafton Gate East, Central Milton Keynes	33 storey mixed used building with 302 residential units	11 May 2023	EIA required
Strategic Urban Extension. Residential & Mixed Development	21/03420/OUTEIS	Land to East of Willen Road, Newport Pagnell	800 Houses, primary school and local centre	31 May 2023	Application permitted

Table C.2 – New developments not yet approved

Application Type	Application No:	Location	Proposal	Date of Decision	Progress
Strategic Urban Extension. Residential & Mixed Development	22/00524/OUTEIS	North of Bow Brickhill and Woburn Sands Road	Approx 1920 residential Dwellings secondary and primary schools, local centre including retail and commercial		Consultation stage
Residential Development and mixed use	23/01739/FUL	The Point, 602 Midsummer Boulevard, Central Milton Keynes	Up to 21 storeys building for 487 Apartments, leisure and retail uses.		Consultation Stage
Residential and mixed use space	23/00550/FUL	Bank House, Midsummer Boulevard, Central Milton Keynes	20 Storey Block to provide 355 residential units and mixed use space	15 November 2023	Appeal in progress

Additional air quality works undertaken by Milton Keynes City Council during 2023

Milton Keynes City Council has not completed any additional works within the reporting year of 2023.

QA/QC of diffusion tube monitoring

Nitrogen dioxide diffusion tubes are prepared 'in-house' by Milton Keynes Council using 20% triethanolamine (TEA) in water and are analysed following the procedures set out in the AEA Practical Guidance document produced by the Defra Working Group on Harmonisation of NO_2 Diffusion Tubes that was released early in 2008. The Council participates in the proficiency testing scheme, AIR PT, provided by LGC Standards for quality assurance of diffusion tube analysis and the monthly NO_2 Network Field Intercomparison Exercise managed by the National Physical Laboratory (NPL). The monitoring has been completed in adherence with the 2023 Diffusion Tube Monitoring Calendar.

Diffusion tube annualisation

Annualisation is required for any site with data capture less than 75% but greater than 25%. Annualisation was required for diffusion tube location QQ1 and QQ2, Silver Street, Stony Stratford because there was only 6 months of data. Annualisation was carried out using the Diffusion Tube Data Processing Tool prepared by Bureau Veritas, using data from the Fixed Station, Civic and Roadbox 2, Olney.

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

Site ID	Annualisation Factor <Site 1 Name>	Annualisation Factor <Site 2 Name>	Average Annualisation Factor	Raw Data Annual Mean	Annualised Annual Mean	Comments
QQ1	0.8964	0.9861	0.9413	-	-	*Duplicate Site with QQ1 and QQ2 - Annual data provided for QQ2 only*
QQ2	0.8964	0.9861	0.9413	17.4	16.3	*Duplicate Site with QQ1 and QQ2 - Annual data provided for QQ2 only*

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.

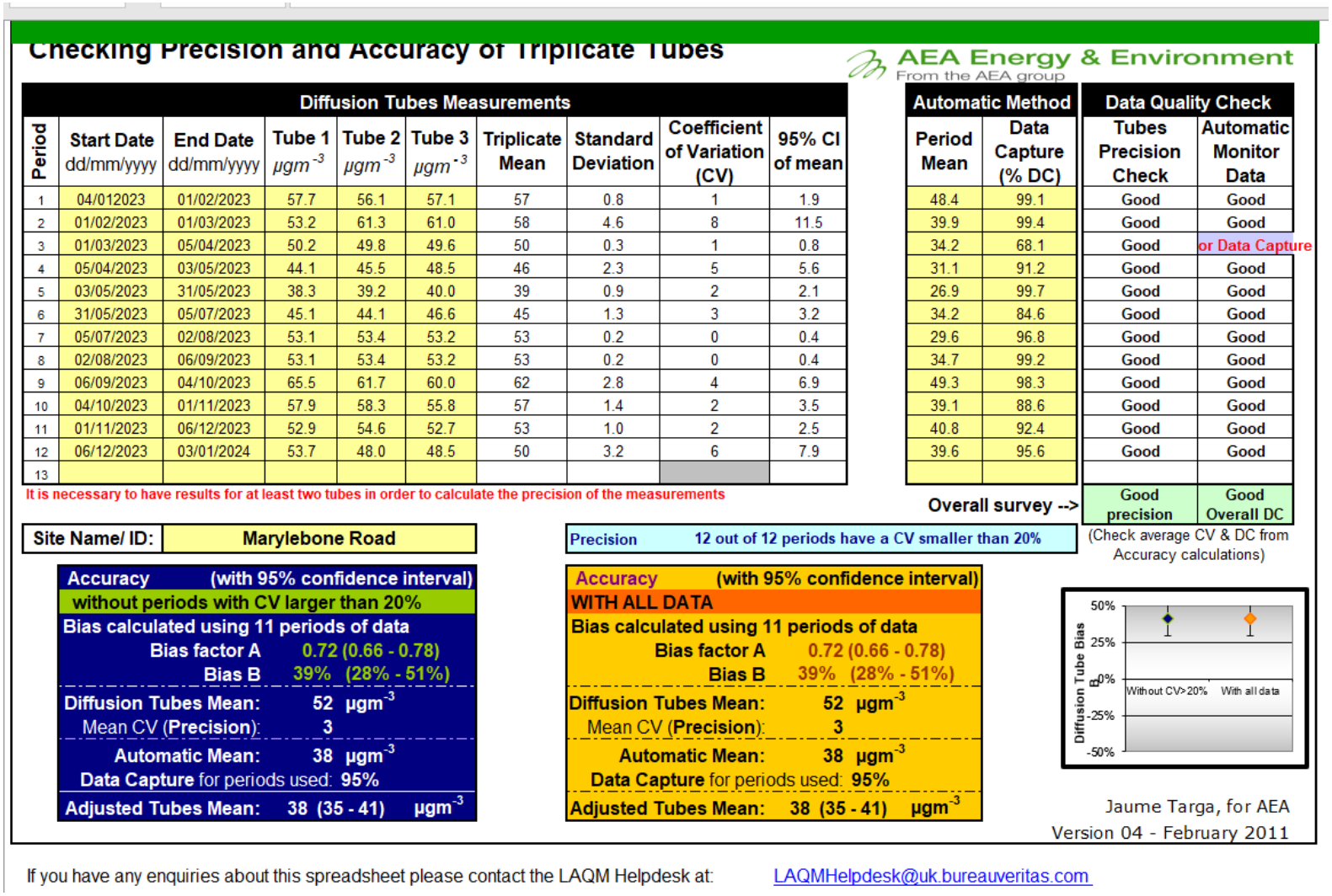
Milton Keynes City Council have applied a national bias adjustment factor of 0.72 to the 2023 monitoring data. A summary of bias adjustment factors used by Milton Keynes City Council over the past five years is presented in Table C.4.

A national factor using MKCC's Marylebone Road intercomparison study has been used because there were some gaps in the data for our local co-location studies. Data from the Marylebone Road study is shown in Figure C.1.

Table C.4 – Bias adjustment factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2023	National	06/24	0.72
2022	National	03/23	0.78
2021	Local	-	0.94
2020	National	06/21	0.83
2019	National	06/20	0.84

Figure C.1 – Co-location study at Marylebone Road



Checking Precision and Accuracy of Triplicate Tubes

AEA Energy & Environment
From the AEA group

Diffusion Tubes Measurements

Period	Start Date dd/mm/yyyy	End Date dd/mm/yyyy	Tube 1 μgm^{-3}	Tube 2 μgm^{-3}	Tube 3 μgm^{-3}	Triplicate Mean	Standard Deviation	Coefficient of Variation (CV)	95% CI of mean
1	04/012023	01/02/2023	57.7	56.1	57.1	57	0.8	1	1.9
2	01/02/2023	01/03/2023	53.2	61.3	61.0	58	4.6	8	11.5
3	01/03/2023	05/04/2023	50.2	49.8	49.6	50	0.3	1	0.8
4	05/04/2023	03/05/2023	44.1	45.5	48.5	46	2.3	5	5.6
5	03/05/2023	31/05/2023	38.3	39.2	40.0	39	0.9	2	2.1
6	31/05/2023	05/07/2023	45.1	44.1	46.6	45	1.3	3	3.2
7	05/07/2023	02/08/2023	53.1	53.4	53.2	53	0.2	0	0.4
8	02/08/2023	06/09/2023	53.1	53.4	53.2	53	0.2	0	0.4
9	06/09/2023	04/10/2023	65.5	61.7	60.0	62	2.8	4	6.9
10	04/10/2023	01/11/2023	57.9	58.3	55.8	57	1.4	2	3.5
11	01/11/2023	06/12/2023	52.9	54.6	52.7	53	1.0	2	2.5
12	06/12/2023	03/01/2024	53.7	48.0	48.5	50	3.2	6	7.9
13									

It is necessary to have results for at least two tubes in order to calculate the precision of the measurements

Automatic Method		Data Quality Check	
Period Mean	Data Capture (% DC)	Tubes Precision Check	Automatic Monitor Data
48.4	99.1	Good	Good
39.9	99.4	Good	Good
34.2	68.1	Good	or Data Capture
31.1	91.2	Good	Good
26.9	99.7	Good	Good
34.2	84.6	Good	Good
29.6	96.8	Good	Good
34.7	99.2	Good	Good
49.3	98.3	Good	Good
39.1	88.6	Good	Good
40.8	92.4	Good	Good
39.6	95.6	Good	Good
Overall survey -->		Good precision	Good Overall DC

(Check average CV & DC from Accuracy calculations)

Site Name/ ID: Marylebone Road

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

Accuracy (with 95% confidence interval)
without periods with CV larger than 20%
Bias calculated using 11 periods of data
Bias factor A 0.72 (0.66 - 0.78)
Bias B 39% (28% - 51%)
Diffusion Tubes Mean: 52 μgm^{-3}
Mean CV (**Precision**): 3
Automatic Mean: 38 μgm^{-3}
Data Capture for periods used: 95%
Adjusted Tubes Mean: 38 (35 - 41) μgm^{-3}

Accuracy (with 95% confidence interval)
WITH ALL DATA
Bias calculated using 11 periods of data
Bias factor A 0.72 (0.66 - 0.78)
Bias B 39% (28% - 51%)
Diffusion Tubes Mean: 52 μgm^{-3}
Mean CV (**Precision**): 3
Automatic Mean: 38 μgm^{-3}
Data Capture for periods used: 95%
Adjusted Tubes Mean: 38 (35 - 41) μgm^{-3}

Jaume Targa, for AEA
Version 04 - February 2011

If you have any enquiries about this spreadsheet please contact the LAQM Helpdesk at: LAQMHelpdesk@uk.bureauveritas.com

NO2 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.

No diffusion tube NO_2 monitoring locations within Milton Keynes required distance correction during 2023.

QA/QC of automatic monitoring

The three automatic monitoring stations are under a service contract with ACOEM who provide twice yearly services of the stations. Now that the Fixed Station particulate monitor and ozone monitor have joined Defra's Automatic Urban and Rural Network (AURN) the central management and co-coordination is contracted to Bureau Veritas and the quality assurance and quality control (QA/QC) activities are contracted to Ricardo Energy and Environment, while the operating of the monitoring station continues to be carried out by Milton Keynes City Council.

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

The type of PM10/PM2.5 monitor utilised within Milton Keynes City Council does not require the application of a correction factor.

Automatic monitoring annualisation

All automatic monitoring locations within Milton Keynes Council recorded data capture of greater than 75% therefore it was not required to annualise any monitoring data. In addition, any sites with a data capture below 25% do not require annualisation.

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 passive or automatic NO_2 monitoring locations within Milton Keynes Council required distance correction during 2023.

Appendix D: Maps of monitoring locations and AQMAs

Automatic monitoring stations

Figure D.1 – Map of Milton Keynes showing the three automatic monitoring stations

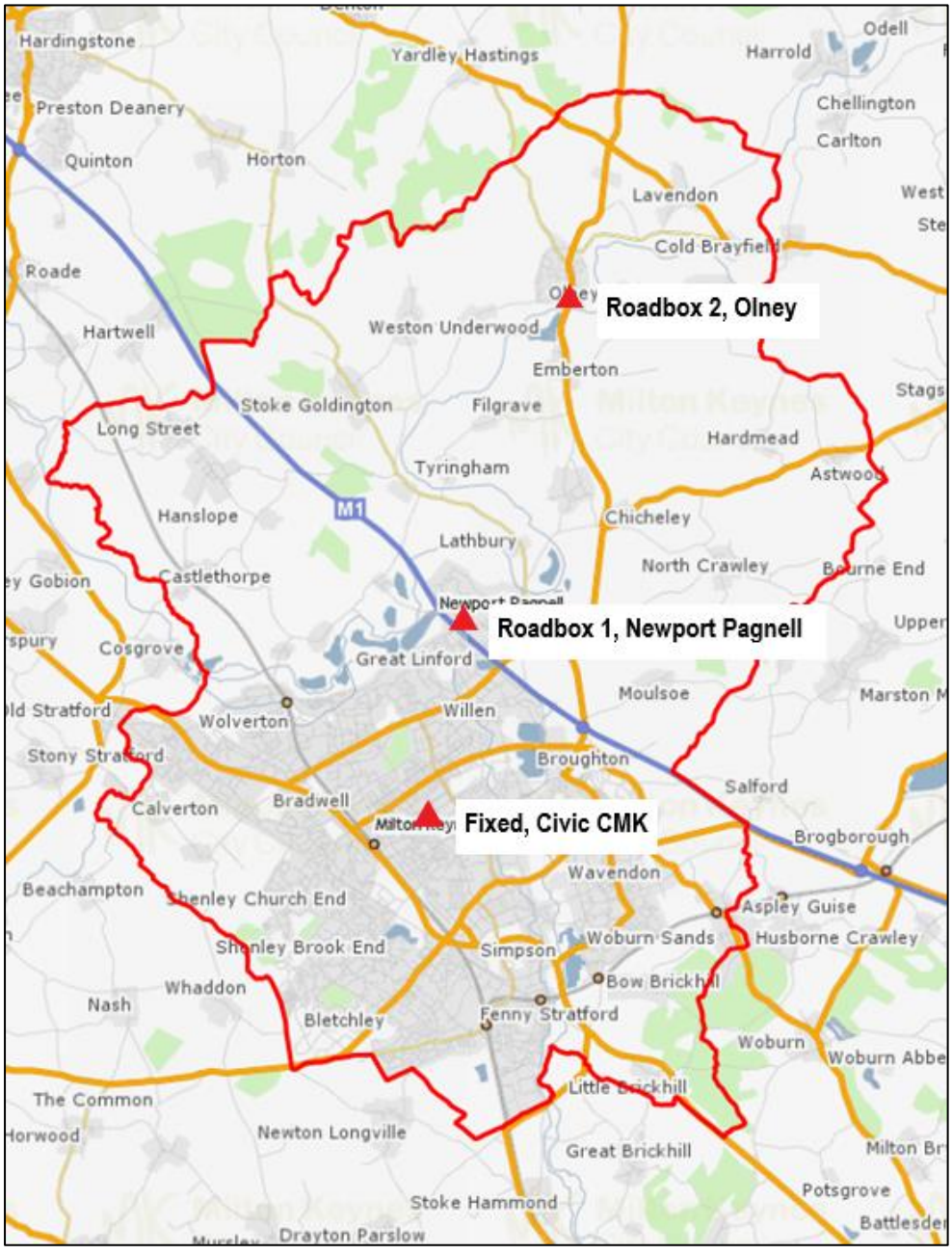


Figure D 2 – Map of Fixed Air Quality Station, Civic Offices, Central Milton Keynes

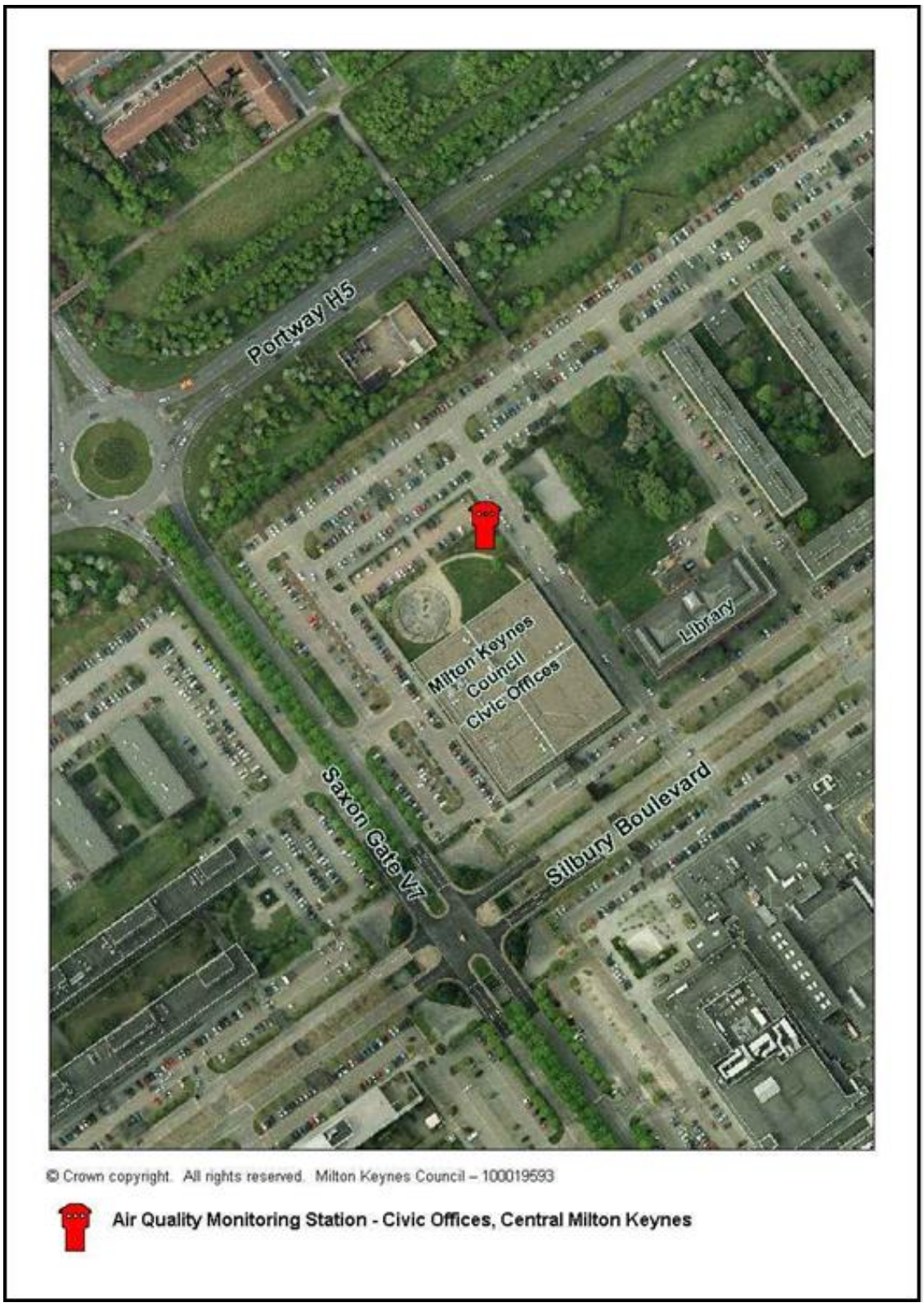


Figure D.3 – Map of Roadbox 1 Air Quality Station, Wolverton Road, Newport Pagnell

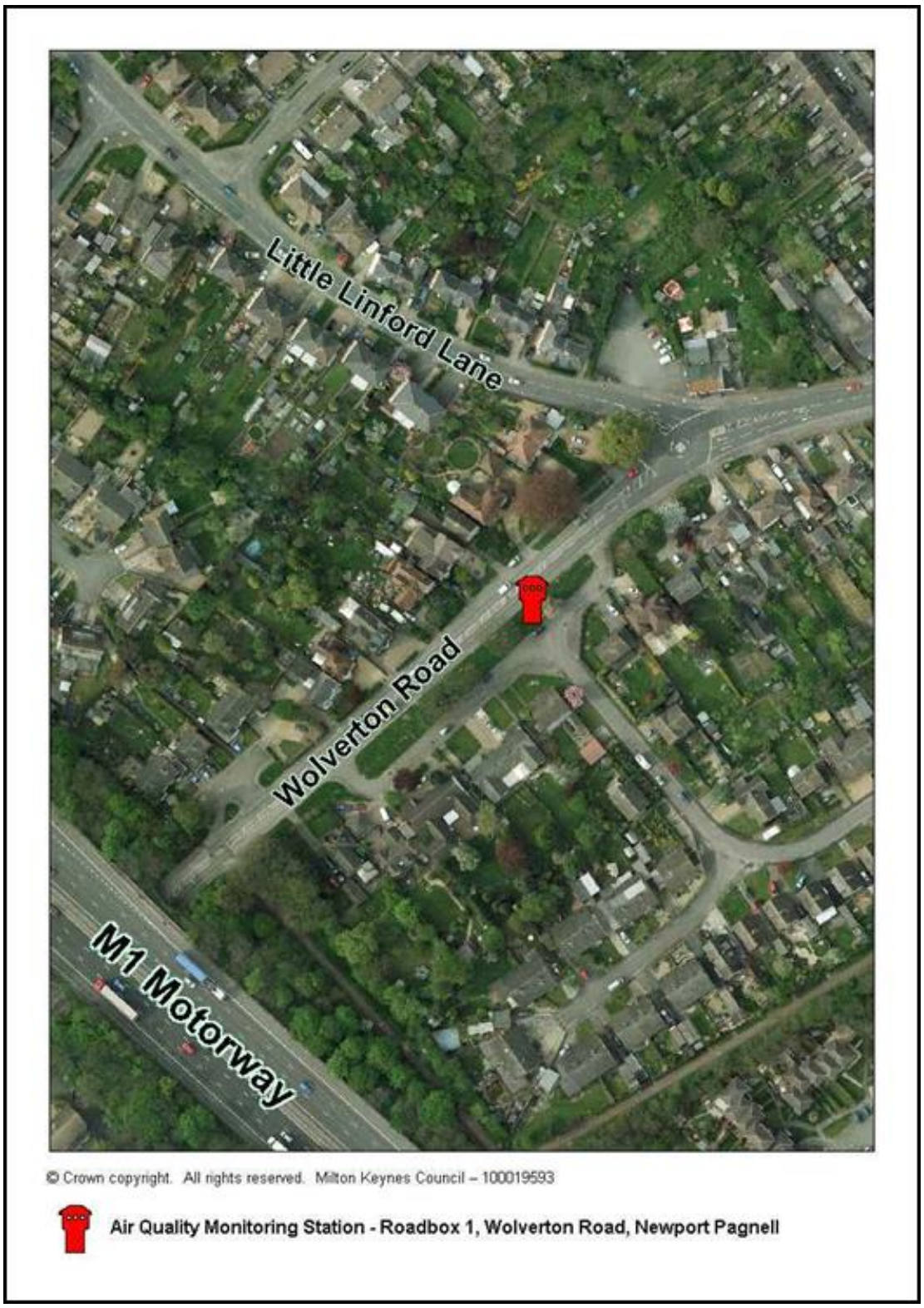


Figure D.4 - Map of Roadbox 2 Air Quality Station, High Street South, Olney (Within now revoked Air Quality Management Area)

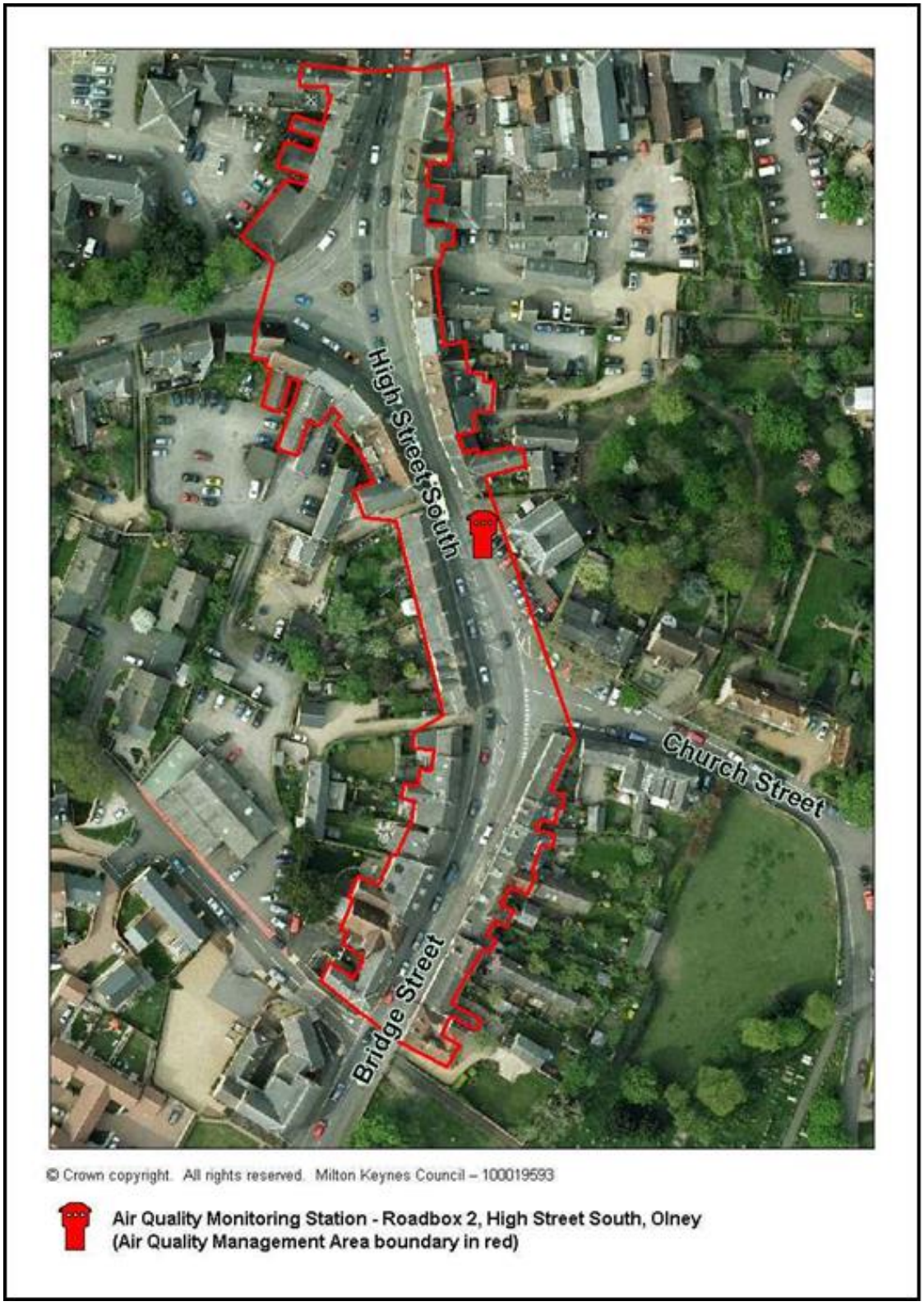


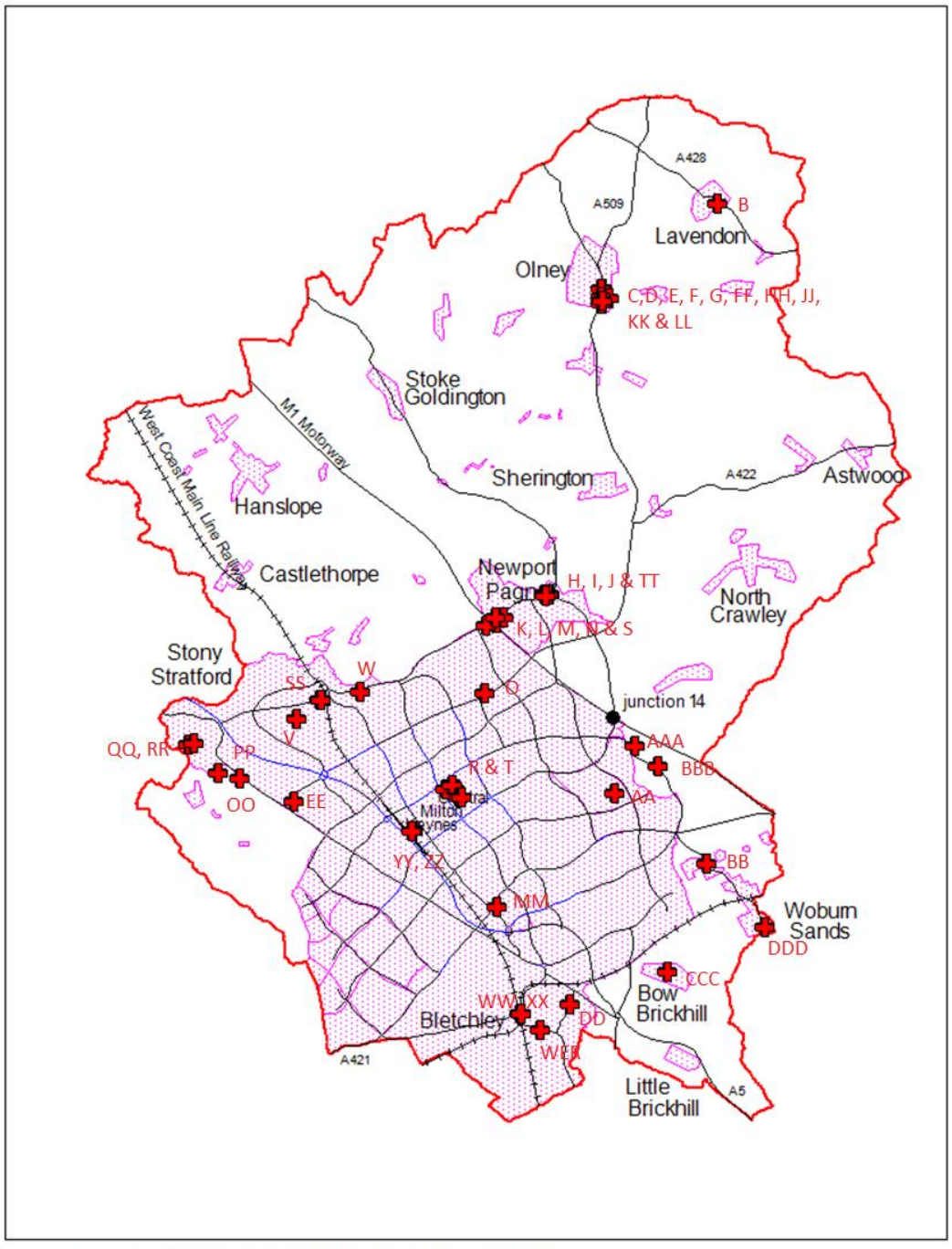
Figure D.5 - Automatic air quality monitoring station photographs

Fixed Monitoring Station, Civic, CMK

Roadbox 1 Monitoring Station Wolverton Road, Newport Pagnell (M1 bridge in background)

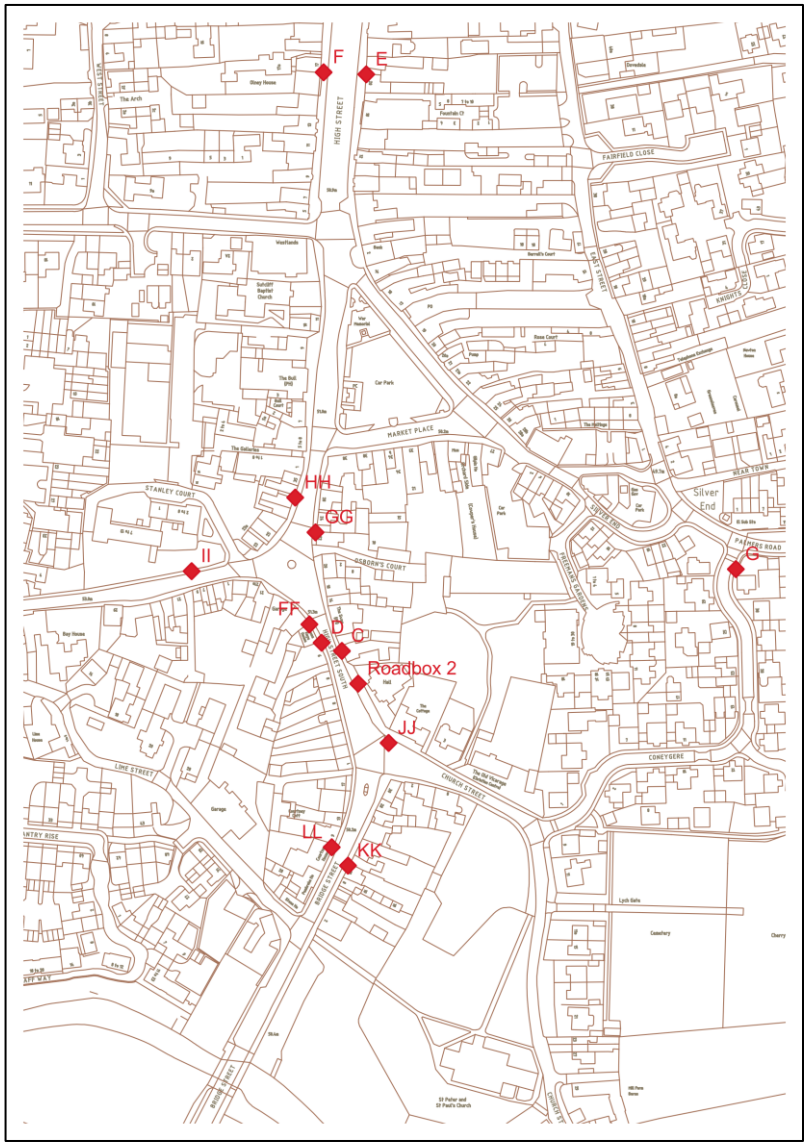
Roadbox 2 Monitoring Station High Street South, Olney

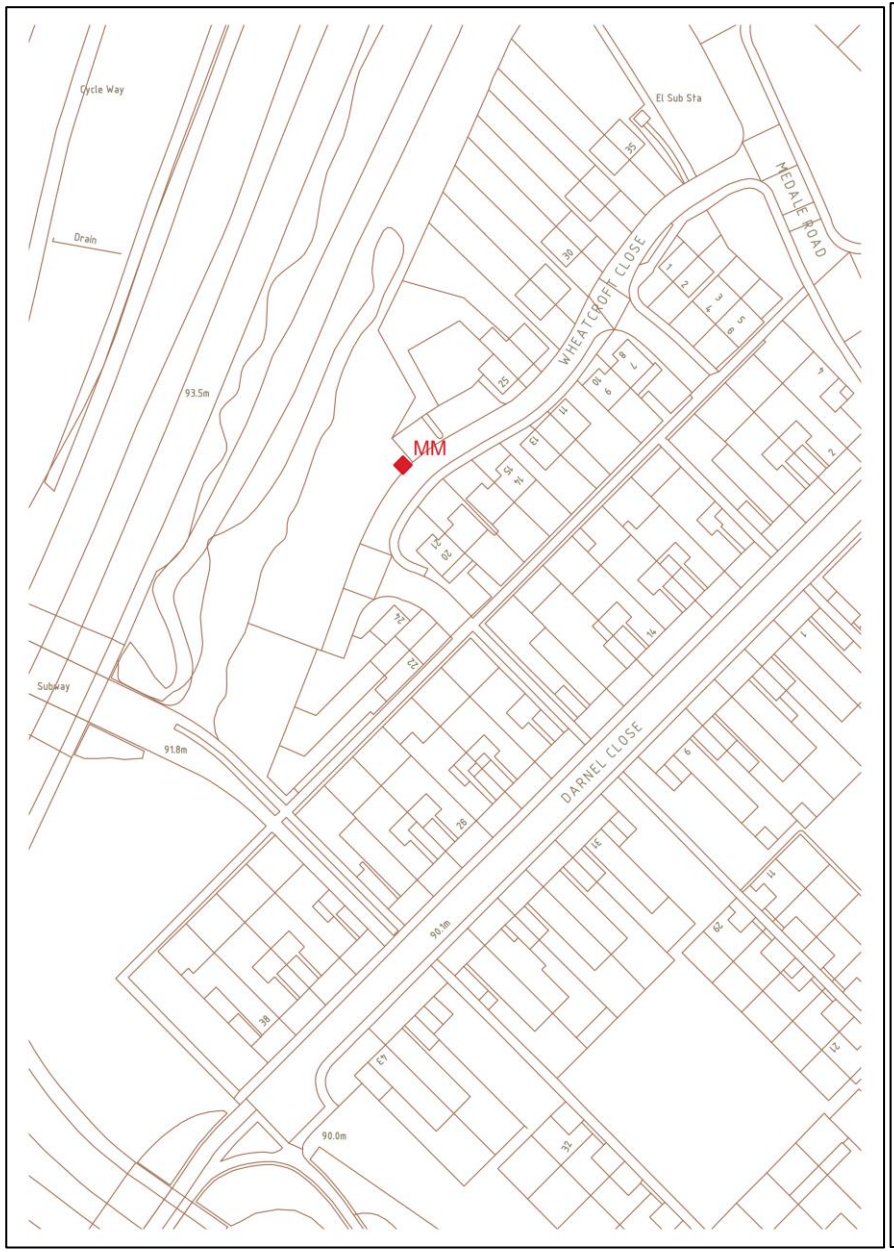
Figure D.6 – Map of non-automatic sites



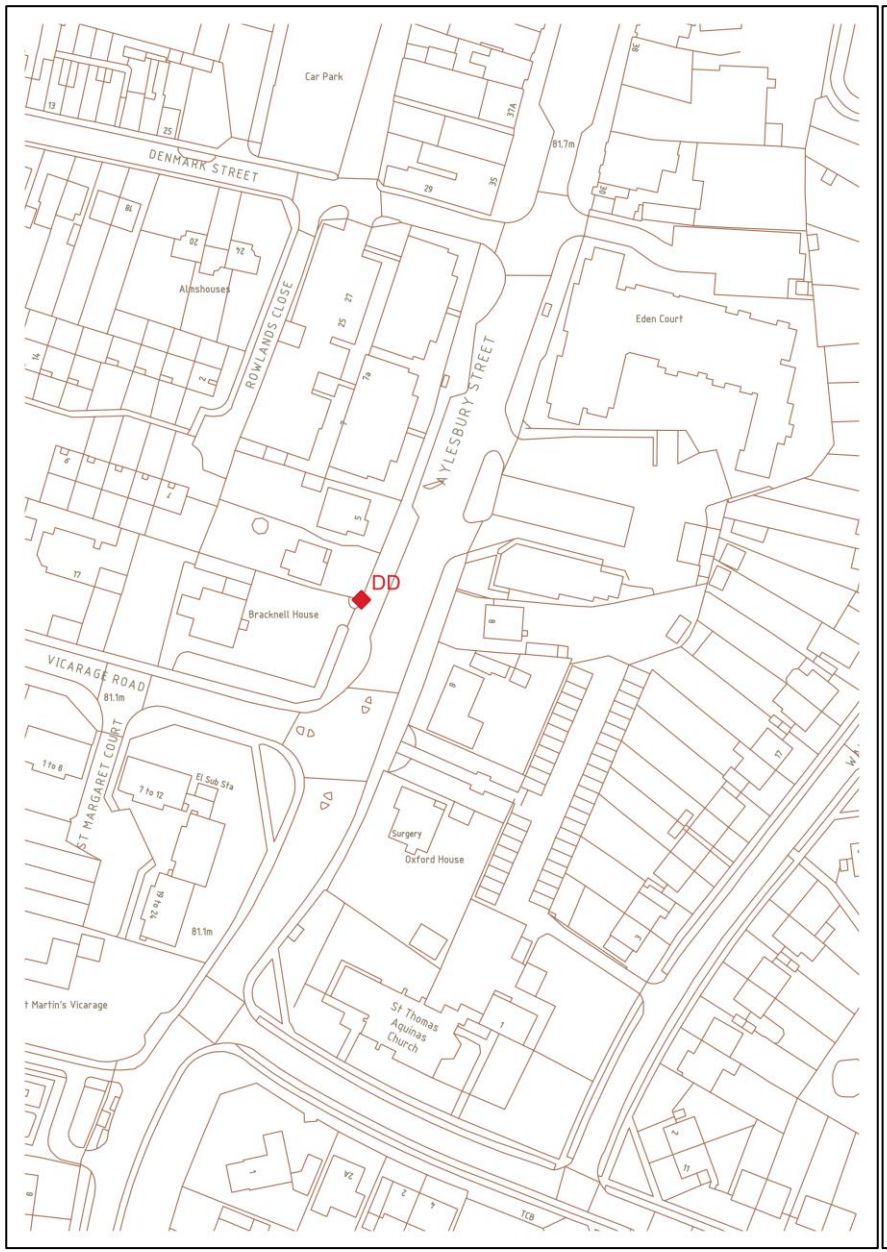
Nitrogen Dioxide diffusion tube location

Figure D.7 – Close up maps of diffusion tube locations




Cycle Way
El Sub Sta
Drain
MEDALE ROAD
WHEATCROFT CLOSE
93.5m
MM
Subway
91.8m
DARNEL CLOSE
90.5m
90.0m


Playing Field
Playground
STATION ROAD
CCC
Bow Brickhill
Bow Brickhill County First School
LONDON END
London End
Pond


Car Park
DENMARK STREET
Almshouses
ROWLANDS CLOSE
AYLESBURY STREET
Eden Court
DD
Bracknell House
VICARAGE ROAD
81.1m
ST MARGARET COURT
1 to 6
7 to 12
El Sub Sta
Surgery
Oxford House
81.1m
t Martin's Vicarage
St Thomas Aquinas Church
81.7m


AAA
BBB


Watts' Arms (PH)
GP
114.5m
WESTERN DRIVE
FAITH TERRACE
CARRIERS CLOSE
FFF
NORTH ROW
NORTH NINTH STREET
NORTH EIGHTH STREET
Lloyd's Court
Library
Municipal Offices
Careers and Training Advice Centre
Community Centre
Gas Governor
Silbury Arcade
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Static
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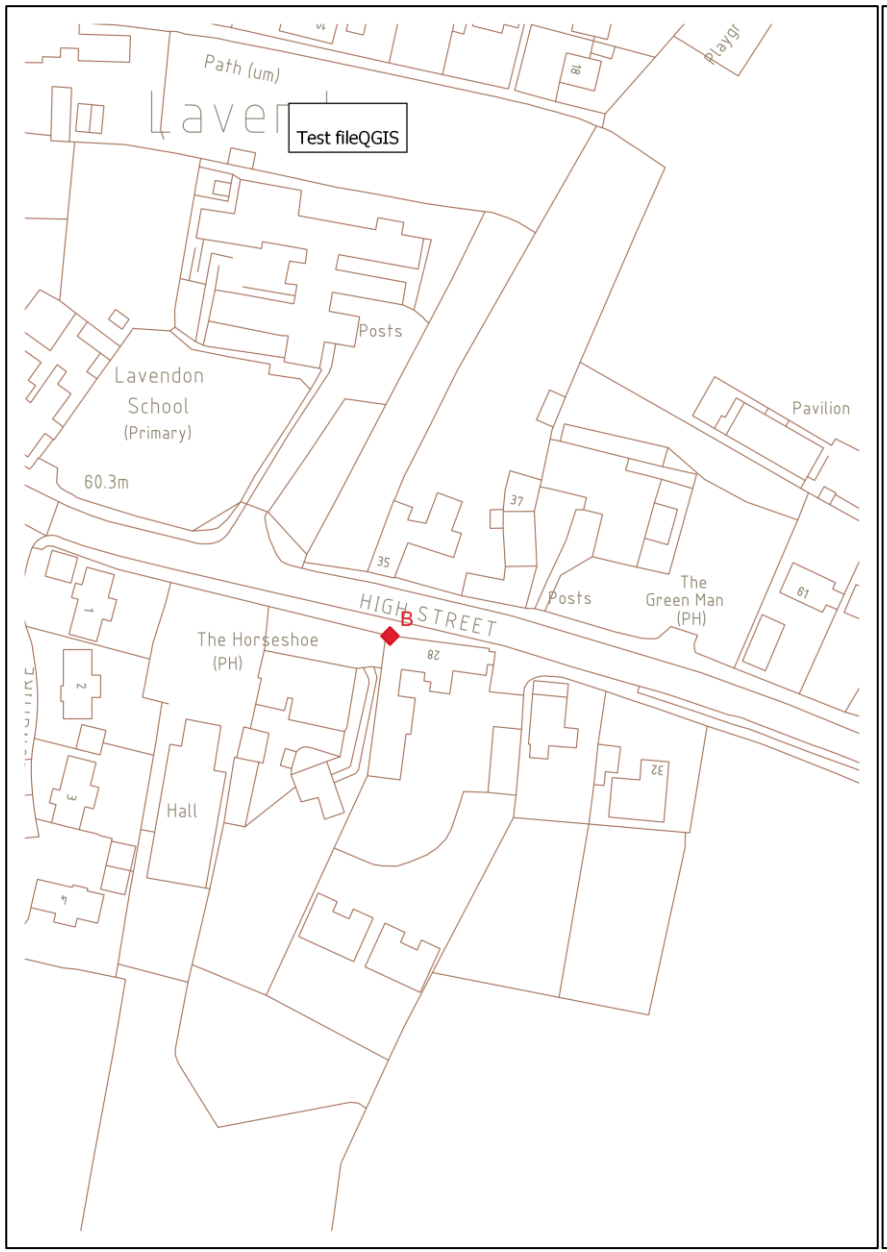
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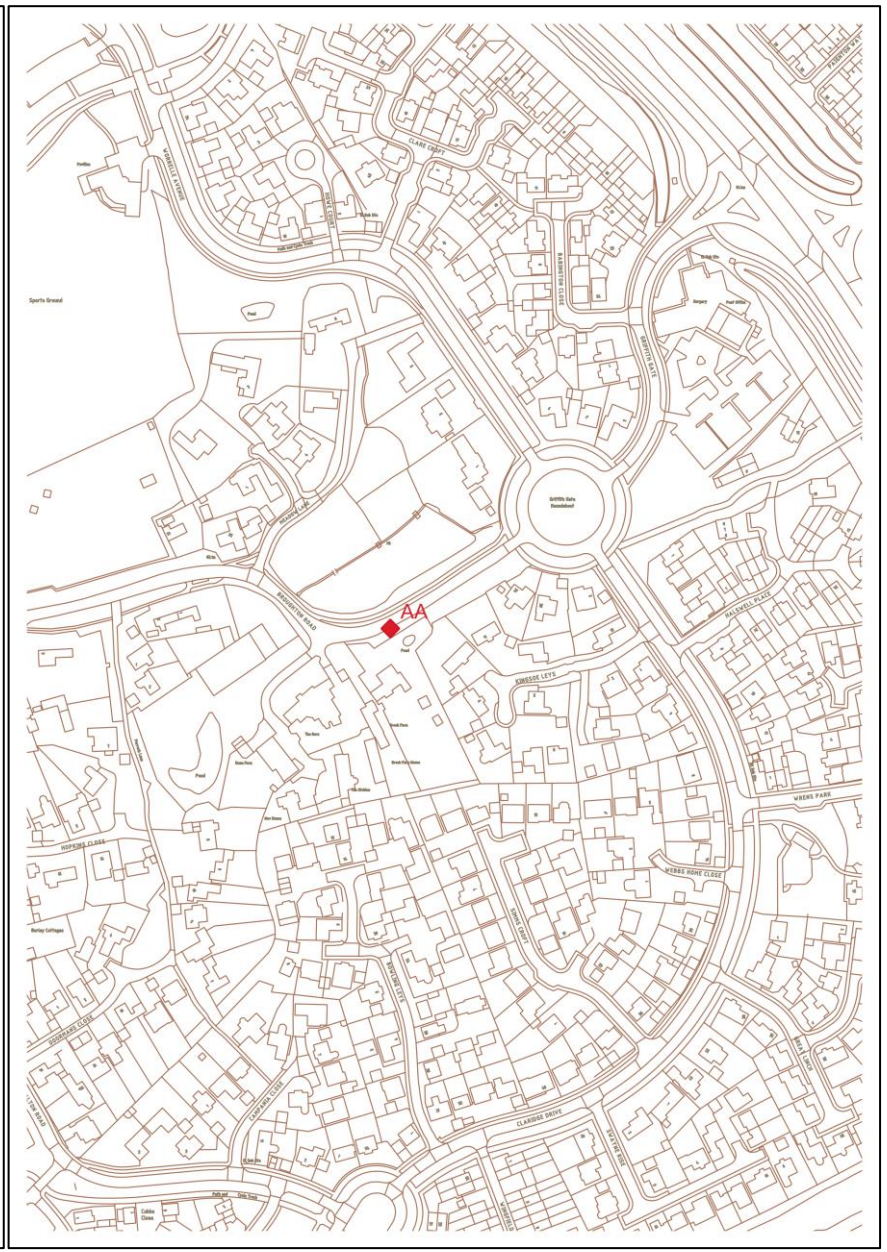
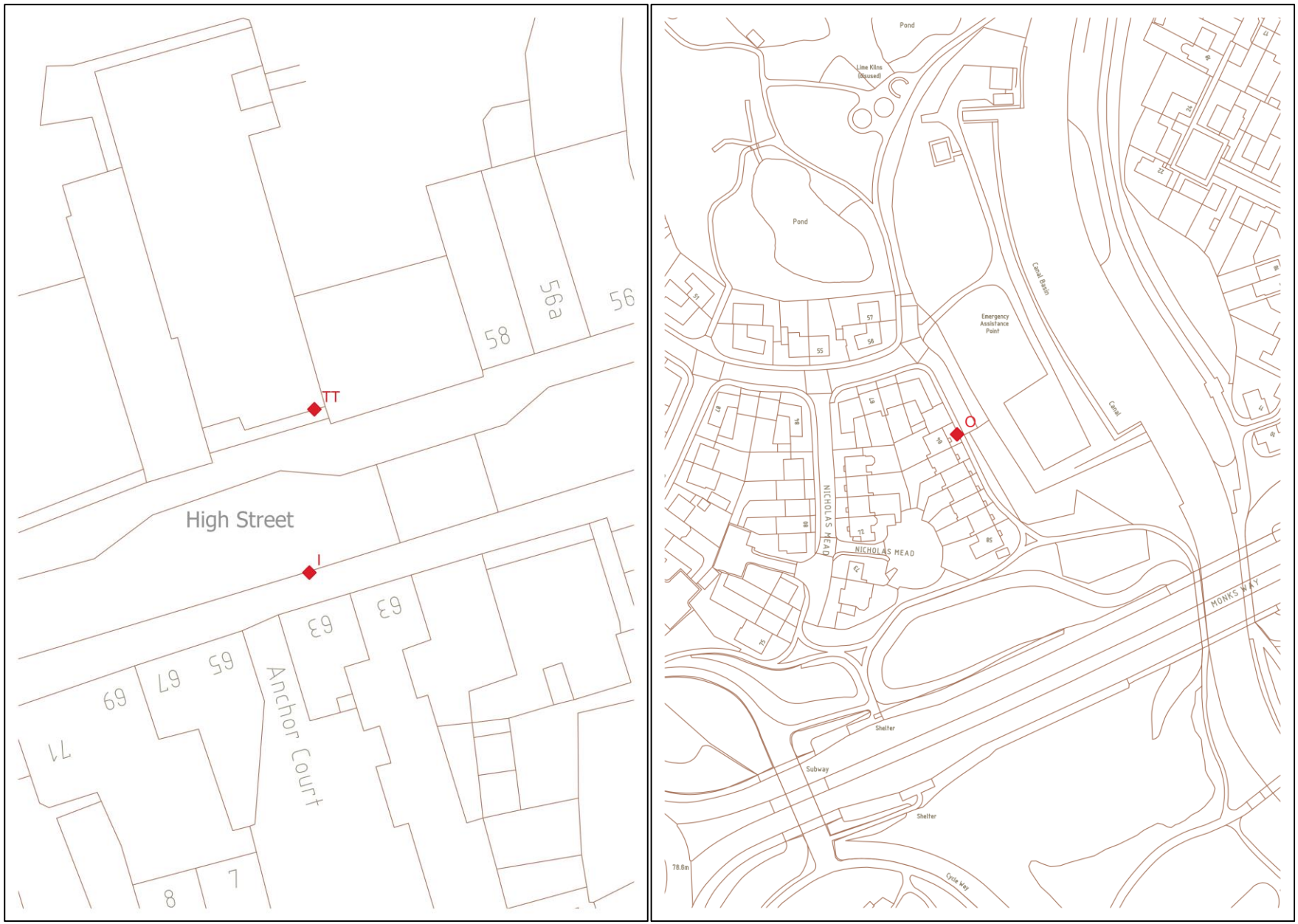
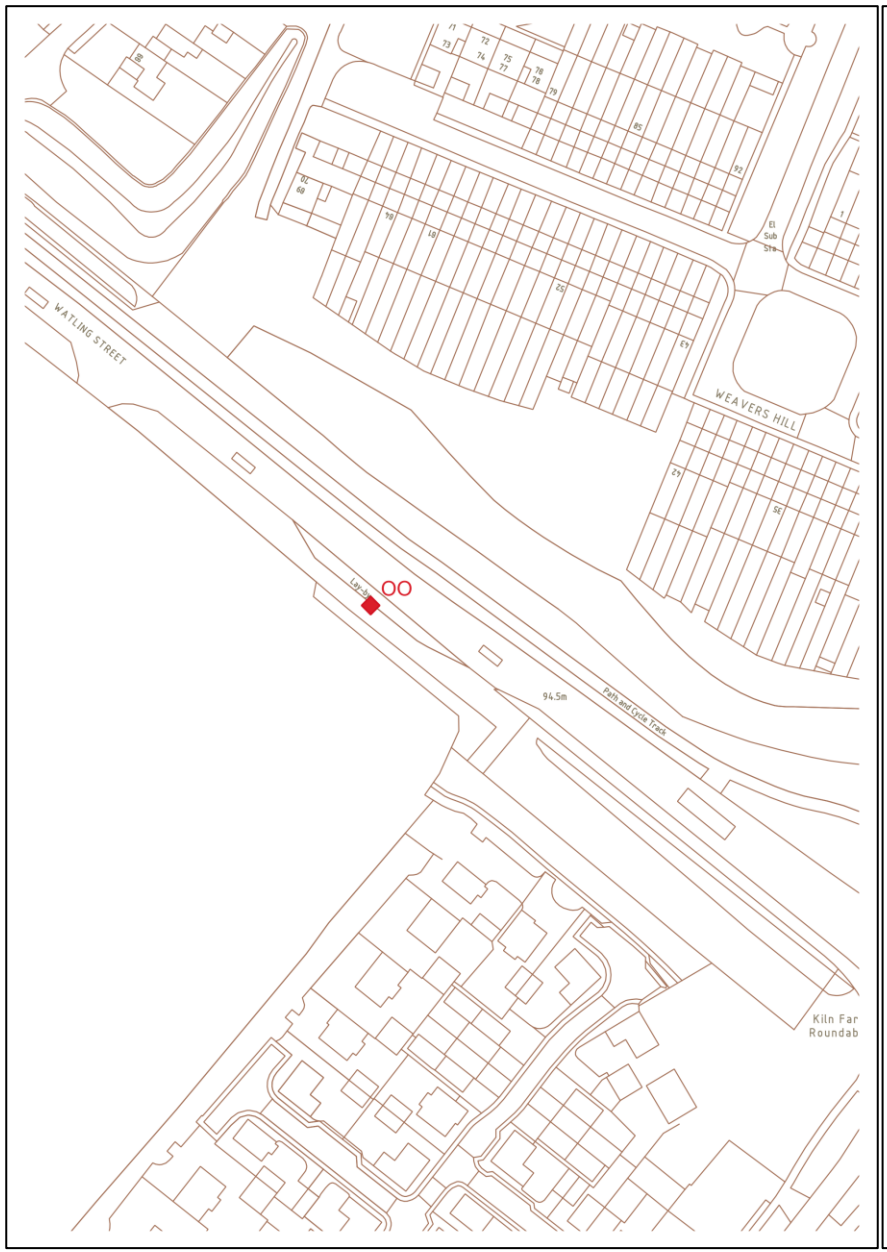
(Primary)
60.3m
Pavilion
37
35
Posts
The
Green Man
(PH)
61
HIGH STREET
B
The Horseshoe
(PH)
28
Hall
32


AA


High Street
TT
I
Anchor Court
58
56a
56
63
63
65
67
69
71
7
8
O
Pond
Pond
Lime Kilns (disused)
Canal Basin
Emergency Assistance Point
Canal
NICHOLAS MEAD
NICHOLAS MEAD
MONKS WAY
Shelter
Subway
Shelter
Cycle way
78.8m


PR
QQ
PP


WATLING STREET
WEAVERS HILL
OO
94.5m
Path and Circle Trees
Kiln Far
Roundab


Shelter
The
Wavendon
Arms
(PH)
NEWPORT ROAD
BB
Wavendon
Path (um)
Path (um)
Path (um)
Track


ATION ROAD
Nursing Home
Surgery
102.2m
Hotel
Bank
DDD
Car Pk
Bank
Church
The Bungalow
Club Courts
Car Park
El Sub Sta
Hall
CHAPEL STREET
102.6m
PC
HIGH STREET
PO
War Meml
Shelton House
Police House
Shelton Court
Hall
Garage
104.6m
SS
SS
W
V

Appendix E: Summary of air quality objectives in England

Table E.1 – Air quality objectives in England

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

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.
- Milton Keynes Council, Annual Status Report 2023


Milton Keynes
City Council