2026 Air Quality Annual Status Report (ASR)

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

Date: June, 2026

Information	Redditch Borough Council Details
Local Authority Officer	Todd Wilkes
Department	Technical Services
Address	Wyre Forest House Finepoint Way Kidderminster Worcestershire DY11 7WF
Telephone	01905 822799
E-mail	enquiries@worcsregservices.gov.uk
Report Reference Number	RBC/ASR/2026
Date	June 2026

Local Responsibilities and Commitment

Local Responsibilities and Commitment This ASR was prepared by the Worcestershire Regulatory Services Technical Services on behalf of Redditch Borough Council with the support and agreement of the following officers and departments:

Worcestershire Regulatory Services

Redditch Borough Council

Worcestershire County Council

Worcestershire Regulatory Services (WRS) is a shared service formed from the Environmental Health and Licensing departments of the six Worcestershire District Councils. Responsibility of managing (monitoring and reporting of) local air quality transferred from the partnership councils to WRS in April 2011.

This ASR has not been signed off by a Director of Public Health. As in previous years, a copy of ASR will be provided to the DoPH office post publication.

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

Technical Pollution Team

Worcestershire Regulatory Services

Wyre Forest House

Finepoint Way

Kidderminster

Worcestershire

DY11 7WF

enquiries@worcsregservices.gov.uk

Executive Summary: Air Quality in Our Area

Air Quality in Redditch Borough Council

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.

Air pollution particularly affects the most vulnerable in society, children, the elderly, and those with existing heart and lung conditions. Low-income communities are also disproportionately impacted by poor air quality, exacerbating health and social inequalities.

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

Table ES 1 - Description of Key Pollutants

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

Redditch generally enjoys good air quality. Over the five-year period 2021 to 2025 there have been no monitored exceedances of the annual average air quality objective for nitrogen dioxide (NO_2) in the district.

Monitoring of nitrogen oxides (NOx) Redditch is undertaken via a network of passive (diffusion) tubes. Diffusion tubes are mainly located in the urban centre of Redditch, with additional monitoring taking places in specific areas of interest.

There have been no Air Quality Management Areas declared in Redditch to date.

Monitoring results within the Redditch Borough area demonstrate that there were no exceedances of the NO_2 air quality objective of 40µg/m^3 in 2025. Three of the four historic monitoring sites have shown a slight increase from 2024 to 2025 while one (OR1) has shown a slight decrease. The largest increase was 1.0µg/m^3 which was recorded at SS, this saw a rise from 14.9µg/m^3 to 15.9µg/m^3. The largest decrease of 2.7µg/m^3 was recorded at location OR1, with concentrations reducing from 29.0µg/m^3 to 26.3µg/m^3. The lowest concentration was 10.7µg/m^3 recorded at STOR. Two new monitoring sites were added to the monitoring network in 2025 – 64UH and 397BR, both of which are below NO_2 air quality objective of 40µg/m^3 (35.3 µg/m^3 and 12.6 µg/m^3 respectively). Some tubes were removed at the start of 2026, which will be reported on in the 2026 ASR.

No annual means greater than 60µg/m^3 have been recorded indicating it is extremely unlikely that there have been any exceedances of the 1-hour mean objective for NO_2 at any monitoring sites.

Long-term trends and observed reductions in nitrogen dioxide concentrations are discussed further in Section 3.2 of this report.

WRS has reviewed the DEFRA national background maps to determine projected $PM_{2.5}$ concentrations within the Redditch borough area for the 2025 calendar year. The average total $PM_{2.5}$ across the Redditch Borough is 6.4µg/m^3 with the lowest concentration of 5.81µg/m^3 and the highest concentration being 7.53µg/m^3. $PM_{2.5}$ concentrations within the Redditch Borough are well below the annual average EU limit value for $PM_{2.5}$ of 25µg/m^3 and are below the proposed annual average limit value for $PM_{2.5}$ target of 10µg/m^3 across England by 2040.

Redditch Borough Council also monitor $PM_{2.5}$ with two Earthsense Zephyr low-cost sensors. Both locations are below the 2028 interim target and 2030 legally binding target of 10µg/m^3. These were relocated from original positions at beginning of August 2025 to two new locations. Cherry Tree Walk and 44 Guinness Close were both selected as new sites, due to them being identified as areas of deprivation downwind from area of affluence – where solid fuel burners are anticipated to be more commonplace, based on known studies.

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.

No AQMAs have been declared within the Redditch Borough area and therefore no specific action plan has been developed to date.

Redditch Borough Council has taken forward a number of direct measures during the current reporting year of 2025 in pursuit of improving local air quality.

Bromsgrove District Council and Redditch Borough Council Provision of Electric Vehicle Charging Infrastructure

About 120 new chargers are set to be placed at 33 locations in the area, after Redditch Borough Council teamed up with Bromsgrove District Council to agree a long-term contract with EV infrastructure provider Zest.

There are currently two new sites which are active and working these are located in Astwood Bank car park, Redditch and Aston Fields car park, Bromsgrove. More sites were also added in the summer of 2025, with further works expected.

Climate Emergency

The Council declared a climate emergency in 2019. On declaration of a climate emergency, an LA is affirming that it will place the Climate Emergency at the centre of its decision-making process. RBC aim to reduce carbon emission by 50% by 2030 and achieve Net Zero by 2040. Many Net Zero actions and policies have co-benefits of reducing air pollution.

Climate emergency and electric vehicle information is available on the County Council's website via the following links:

Climate emergency– redditchbc.gov.uk

Electric vehicles – redditchbc.gov.uk

Air Quality Actions Plan and Air Quality Strategy

From 2023, local authorities that do not have any AQMAs in their areas are required to produce an Air Quality Strategy outlining how air quality will be maintained. Production of an interim air quality strategy for the Redditch Borough Council has been delayed and prioritised for 2026/2027 due to other priorities across the county. However, certain

potential elements of the strategy, such as improving communication of air quality, are evolving through other work streams for example Behavioural Change interactions with local schools and communities, annual Clean Air Day campaigns and working with local authority teams around the county to ensure air quality is considered appropriately within local strategy and policy.

WRS continue to monitor air quality in the Redditch Borough and across Worcestershire on behalf of the six districts.

Redditch Borough Council's priorities for the coming year are:

- Production of an interim Air Quality Strategy
- Continued monitoring to inform the Air Quality Strategy
- Promoting behavioural change through awareness and Clean Air Day campaigns

The principal challenges and barriers to implementation that Redditch Borough Council anticipates facing are:

- Available resource and competing priorities

Real-time Air Quality Monitoring Project

In February 2023, WRS were successful in a bid to the Air Quality Grant Scheme 2022/23 to establish an enhanced real-time air quality monitoring network across Worcestershire. The scope of the bid was to establish a real-time air quality monitoring network across the main areas of air quality concern in Worcestershire for purposes of providing enhanced monitoring data on a range of pollutants. Additionally, the proposal included informing the public and vulnerable groups of the status of air pollution in real time to encourage behaviour change.

The scheme has involved the installation of approximately 26 'low-cost Air Quality Monitors' which measure NO_2, PM_{10}, and $PM_{2.5}$ across the county for a period of 3 years (with EA MCERTS standard accreditation as indicative ambient particulate matter devices). The results of monitoring will be used to inform decision making and requirements for further action as necessary.

In 2023 the experienced sensor provider Earthsense were appointed as successful suppliers following a rigorous procurement process. The sensors, known as 'Zephyrs' are provided, operated and serviced by Earthsense who also provide data access.

Appropriate monitoring locations were determined by WRS in collaboration with Public Health, Worcestershire County Council Street Lighting team and Earthsense taking into consideration requirements of Redditch Borough Council.

The locations have been chosen to maximise data capture within locations proximal to vulnerable communities and/or from a range of sources of air pollution including transport, solid fuel burning, industry and agriculture.

Two of the twenty-six monitors were installed in the Redditch Borough between January and May 2024, following completion of required structural assessments. These were located on:

- Meadow Hill Lane
- Rickyard Lane

And moved in the summer of 2025 to:

- Cherry Tree Walk
- Rickyard Lane

New locations were chosen to observe impacts of woodburning on areas of deprivation, determined by observing indices of deprivation in LSOAs (Lower-layer super output areas). The new sites are downwind from areas of affluence, which are more likely to utilise woodburning stoves.

Earthsense and WRS have designed a publicly accessible portal to the real time monitoring data which launched in May 2024. A summary of monitored results from 2025 is provided in Appendix F.

Worcestershire County Council Actions

Worcestershire County Council Highways Department have progressed the following schemes within the Redditch Borough area during 2025:

The Redditch Local Cycling and Walking Infrastructure Plan (LCWIP)

The Local cycling and walking infrastructure plan has been adopted. ATE funding is being used to delivery an initial scheme from along Studley Road to upgrade the active travel route, linking to the Alexendra Hospital. This route is currently in detailed design with delivery to follow later this year and in 2027.

Local cycling and walking infrastructure plans (LCWIPs) | Worcestershire County Council

Redditch Rail Quarter

The project will improve connectivity between the railway station, town centre, bus, taxi and active travel options. This will in turn move people away from travelling by private car, improving congestion and air quality on key corridors. The Local cycling and walking infrastructure plan has been adopted. ATE funding is being used to deliver an initial scheme from along Studley Road to upgrade the active travel route, linking to the Alexendra Hospital. This route is currently in detailed design with delivery to follow later this year and in 2027.

Redditch rail station improvements are currently being revised to reflect the change to funding. This does not impact rail service or frequency.

Work is ongoing and further details can be found here: Redditch Railway Station redevelopment background | Worcestershire County Council.

Conclusions and Priorities

There are currently no AQMAs declared in the Redditch Borough area. Concentrations at identified worst-case scenario locations have been recorded at well below the objectives for nitrogen dioxide. Nitrogen Dioxide levels in the area have remained relatively stable, with minor increases to some of the monitoring sites and minor decreases at others.

Local Authorities that do not have any AQMAs in their areas are required to produce an Air Quality Strategy outlining how air quality will be maintained.

Production of an interim air quality strategy for the Redditch Borough will be prioritised in 2026. However, certain potential elements of the strategy, such as improving communication of air quality, are evolving through other work streams for example Behavioural Change interactions with local schools and communities, Clean Air Day 2025 campaign and working with LA teams around the county to ensure air quality is considered appropriately within local strategy and policy.

Redditch Borough Council has not identified any significant new sources of air pollution within the area for the reporting year of 2025.

Where Air Quality is a relevant concern in terms of new developments, appropriate mitigation measures will be put in place. Relationships with neighbouring authorities and institutions will be maintained to stay abreast of issues and developments that could impact or benefit air quality in Redditch Borough, and to ensure our work is recognised in the wider West Midlands Community.

Monitoring, reviewing, and assessing air quality will continue within Redditch Borough area at relevant areas.

As referred to in the previous section a real-time air quality monitoring network has been set up. This has involved the installation and operation of 26 Zephyr Air Quality monitors' that measure NO_2, PM_{10} and $PM_{2.5}$, as well as other parameters, across the county. Two of these low-cost sensors have been deployed within the Redditch Borough Council area in January 2024 and were later relocated in August 2025. This has provided significant data in respect of PM_{10} and $PM_{2.5}$ for which monitoring across the county has been very limited previously.

Review and assessment of the collected data will be conducted to help inform future projects and strategies to improve air quality across the district. Real time information will enable a better understanding of air quality in the borough to help inform decision making and requirements for further action as necessary.

Key priorities for the next year:

- Continue to monitor air pollutants at key locations across the district utilising the existing diffusion tube network for NOx and real-time low-cost sensors for indicative $PM_{2.5}$
- Review and assess the data from local monitoring sites, and available national sources and guidance to inform future projects and strategies to improve air quality across the district.
- Produce an interim air quality strategy.
- Promoting public access to the Earthsense portal of real time monitoring data on a range of air pollutants to enhance public knowledge and encourage behavioural change
- Ensure air quality is considered appropriately within local strategy and policy where appropriate including working with Air Quality Partners.
- Ensure proportionate mitigation measures are included within new developments where air quality is a relevant concern.
- Work with teams from around the county to ensure air quality is considered appropriately within local strategy and policy where appropriate.
- Maintain relationships with neighbouring authorities and institutions to stay abreast of issues and developments that could impact or benefit air quality in Redditch Borough, and to ensure our work is recognised in the wider West Midlands community.

How to get Involved

There are a number of ways members of the public can help to improve local air quality:

- **Walk or cycle instead of driving**: Leaving your car at home and walking or cycling instead will benefit in three ways - increased exercise, reduced pollution exposure and will reduce individual's pollution emissions.
- **Turn off your engine when stationary or parked**, don't 'idle', particularly outside sensitive receptors such as schools, hospitals, care homes and residential properties.
- **General travel planning advice** is available on Worcestershire County Council's website (including walking, cycling and bus maps and timetables) and Government website:
    - Travel and Roads | Worcestershire County Council
    - Smarter choices: changing the way we travel – GOV.UK(www.gov.uk)
- **Hold meetings by Conference Call** by phone or video conference via Teams, Zoom or Facetime, or other service rather than driving to meetings. This reduces fuel and other travel costs, vehicle maintenance and hire cost, increases productivity through reduction in hours lost through unnecessary travel.
- **Facilitate Flexible Working Arrangements** for non-front-line staff to work remotely from home or nearer home facilities for one or more days a week thus removing or reducing any journey to work. This reduces congestion which has beneficial impacts for delivery times, reduced business costs and thus economic benefits. Additionally, provides social benefits through improved work life balance for employees, reduces local air quality and reduced emergency vehicle response times.
- **Switch Fleet to Low Emission Vehicles:** The government is currently providing grants for up to 75% of Electric Vehicle (EV) charging points, up to 40 charge points:
  Workplace Charging Scheme: guidance for applicants - GOV.UK (www.gov.uk)
- If you must drive, follow fuel efficient driving advice, often known as **'Smarter Driving Tips'**, to save on fuel and reduce your emissions. Several websites promote such advice including:
    - Save money and emissions through ecodriving - Energy Saving Trust
    - How to drive economically - Eco-driving tips | AA (theaa.com)

    - Fuel Consumption & CO2 Databases | Vehicle Certification Agency (vehiclecertification-agency.gov.uk)
- **Reduce air pollution from open fires and wood-burning stoves:** Advice is available from Defra on choosing the right stove, using the right fuels and maintenance, enabling householders to reduce their impact on their health and air quality from open fires and wood burning stoves. Further information is available on the Smokeless Zones and Public Advice pages on WRS website.

Air pollution can affect all of us over our lifetime however certain groups will be more sensitive to the effects of air pollution. Vulnerable groups include adults and children with lung or heart conditions such as asthma, chronic bronchitis, emphysema and chronic obstructive lung disease (COPD). Senior citizens are more likely to be affected by respiratory diseases and children are more likely to be affected by air pollution due to relatively higher breathing and metabolic rates as well as a developing lung and immune system.

Vulnerable individuals and groups can keep informed of:

- Current levels and forecasts of air pollution from Defra at: https://uk-air.defra.gov.uk/.
- If you are sensitive to the effects of air pollution, it may be appropriate to limit the length of time spent in areas of local poor air quality – see advice from Defra at https://uk-air.defra.gov.uk/air-pollution/daqi
- Pollution levels can be monitored on our Earthsense portal and can provide advice on what to do when levels are high at: Worcestershire Air\ EarthSense

Further information for the general public on reducing your family's exposure to poor air quality in Worcestershire and how individuals, business and schools can assist with reducing their impact on local air quality is available at Protecting Me and Others from Air Pollution | Worcestershire Regulatory Services (worcsregservices.gov.uk).

Table of Contents

Figures

Tables

1 Local Air Quality Management

This report provides an overview of air quality in Redditch Borough Council during 2025. 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 Redditch Borough Council to improve air quality and any progress that has been made.

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

2 Actions to Improve Air Quality

2.1 Air Quality Management Areas

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

Redditch Borough Council currently does not have any declared AQMAs.

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

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

1. RBC undertook indicative monitoring in 2024 which have been presented in an appendix. This is commended.
2. A good discussion regarding $PM_{2.5}$ has been included, particularly as both the Public Health Outcomes Framework indicator D01 and Defra modelled backgrounds have been discussed. The Council should continue this approach in future reports.
3. RBC has stated that the 2024 Defra Diffusion Tube Calendar was adhered to in 2024. This is commended and indicative of good practice.
4. It is noted that the council is working on a joint AQS for Worcester. RBC should aim for this to be published in the next reporting year.
5. QA/QC calculations have been correctly completed with sufficient justification and evidence provided. This is commended.
6. Figures have been provided to highlight the location of monitoring sites. It may be useful to make the locations of monitoring sites larger, and these can be quite difficult to identify on top of the current background mapping
7. Clear trend graphs have been included with comparison with the AQO. This should be continued in future ASRs.
8. Last year's appraisal comments have been included and addressed, which is commended.
9. Updates on the progress of the AQS should be included in next year's ASR.

The above comments have been acknowledged, discussion around Redditch Borough Council's AQS is included below.

Redditch Borough Council has taken forward a number of direct measures during the current reporting year of 2025 in pursuit of improving local air quality.

No AQMAs have been declared within the Redditch borough area and therefore no specific action plan is required at this time.

Key developments in 2025 are:

Bromsgrove District Council and Redditch Borough Council Provision of Electric Vehicle Charging Infrastructure

About 120 new chargers are set to be placed at 33 locations in the area, after Redditch Borough Council teamed up with Bromsgrove District Council to agree a long-term contract with EV infrastructure provider Zest.

There are currently two new sites which are active and working these are located in Astwood Bank car park, Redditch and Aston Fields car park, Bromsgrove. More sites were also added in the summer of 2025, with further works expected.

Climate Emergency

The Council declared a climate emergency in 2019. On declaration of a climate emergency, an LA is affirming that it will place the Climate Emergency at the centre of its decision-making process. RBC aim to reduce carbon emission by 50% by 2030 and achieve Net Zero by 2040. Many Net Zero actions and policies have co-benefits of reducing air pollution.

Climate emergency and electric vehicle information is available on the County Council's website via the following links:

Climate emergency– redditchbc.gov.uk

Electric vehicles – redditchbc.gov.uk

Air Quality Actions Plan and Air Quality Strategy

From 2023, local authorities that do not have any AQMAs in their areas are required to produce an Air Quality Strategy outlining how air quality will be maintained. Production of an interim air quality strategy for Redditch has been delayed until 2026/2027 due to other priorities across the county. However, certain potential elements of the strategy, such as improving communication of air quality, are evolving through other work streams for example Behavioural Change interactions with local schools and communities, annual Clean Air Day campaigns and working with local authority teams around the county to ensure air quality is considered appropriately within local strategy and policy.

WRS continue to monitor air quality in the Redditch Borough and across Worcestershire on behalf of the six districts.

Redditch Borough Council's priorities for the coming year are:

- Production of an interim Air Quality Strategy
- Continued monitoring to inform the Air Quality Strategy
- Promoting behavioural change through awareness and Clean Air Day campaigns

The principal challenges and barriers to implementation that Redditch Borough Council anticipates facing are:

- Available resource and competing priorities

Behavioural Change Officer (BCO) work and Improving Air Quality Communication

During 2025, the BCO at WRS supported by Technical Officers and the Air Quality Lead have undertaken a range of direct and indirect interactions to raise awareness of air pollution and encourage behavioural change to improve local air quality including:

- 11 primary/secondary schools visited in Redditch
- Developed the freely available Breathe Better Worcestershire Air Quality toolkit for primary schools with the University of Worcester
- Presented BC work at the International Bike Bus Summit held in Worcester in April 2025
- Produced a local promotional campaign to raise awareness of air quality, encourage use of the public portal to real-time air quality monitoring and behavioural change for Clean Air Day 2025
- The Air Quality pages on WRS website have undergone significant transformation to update information displayed and improve user friendliness following best practice examples identified in the Air Quality Information System publications

Real-time Air Quality Monitoring Project

In February 2023, WRS were successful in a bid to the Air Quality Grant Scheme 2022/23 to establish an enhanced real-time air quality monitoring network across Worcestershire. The scope of the bid was to establish a real-time air quality monitoring network across the main areas of air quality concern in Worcestershire for purposes of providing enhanced monitoring data on a range of pollutants. Additionally, the proposal included informing the public and vulnerable groups of the status of air pollution in real time to encourage behaviour change.

The scheme has involved the installation of approximately 26 ‘low-cost Air Quality Monitors’ which measure NO_2, PM_{10}, and $PM_{2.5}$ across the county for a period of 3 years (with EA MCERTS standard accreditation as indicative ambient particulate matter devices). The results of monitoring will be used to inform decision making and requirements for further action as necessary.

In 2023 the experienced sensor provider Earthsense were appointed as successful suppliers following a rigorous procurement process. The sensors, known as ‘Zephyrs’ are provided, operated and serviced by Earthsense who also provide data access.

Appropriate monitoring locations were determined by WRS in collaboration with Public Health, Worcestershire County Council Street Lighting team and Earthsense taking into consideration requirements of Redditch Borough Council.

The locations have been chosen to maximise data capture within locations proximal to vulnerable communities and/or from a range of sources of air pollution including transport, solid fuel burning, industry and agriculture.

Two of the twenty-six monitors were installed in the Redditch Borough between January and May 2024, following completion of required structural assessments. These were located on:

- Meadow Hill Lane
- Rickyard Lane

And moved in the summer of 2025 to:

- Cherry Tree Walk
- Rickyard Lane

New locations were chosen to observe impacts of woodburning on areas of deprivation, determined by observing indices of deprivation in LSOAs (Lower-layer super output areas). The new sites are downwind from areas of affluence, which are more likely to utilise woodburning stoves.

Earthsense and WRS have designed a publicly accessible portal to the real time monitoring data which launched in May 2024. A summary of monitored the results from 2025 is provided in Appendix F.

Worcestershire County Council Actions

Worcestershire County Council Highways Department have progressed the following schemes within the Redditch Borough area during 2025:

The Redditch Local Cycling and Walking Infrastructure Plan (LCWIP)

The Local cycling and walking infrastructure plan has been adopted. ATE funding is being used to delivery an initial scheme from along Studley Road to upgrade the active travel route, linking to the Alexendra Hospital. This route is currently in detailed design with delivery to follow later this year and in 2027.

Local cycling and walking infrastructure plans (LCWIPs) | Worcestershire County Council

Redditch Rail Quarter

The project will improve connectivity between the railway station, town centre, bus, taxi and active travel options. This will in turn move people away from travelling by private car, improving congestion and air quality on key corridors.

Redditch rail station improvements are currently being revised to reflect the change to funding. This does not impact rail service or frequency.

Work is ongoing and further details can be found here: Redditch Railway Station redevelopment background | Worcestershire County Council

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	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
Priority Air Quality Actions														
1	AQS	Public Information	Via other mechanisms	N/a	2026/27	WRS, RBC	Not Yet Identified	To Be Confirmed	£10k-50k	Planning	<1%	Number of responses to survey, hits on website, data captured. Changed behaviour identified from repeat survey in future	Not Yet Identified	Resources and other priorities
2	Promote Active Travel	Promoting Travel Alternatives	Other	N/a	2027	RBC, WCC	Not yet identified	To be confirmed	£10k-50k	Planning	<0.2%	Number of businesses engaged, number of downloads of guides or website hits, behavioural change confirmed through surveys	Planning	Funding availability
3	Encouraging awareness and behavioural change interventions linked to focussed real time monitoring data	Public Information	Via other Mechanisms	2026	2029	WRS, Worcestershire District Councils	Not Yet Identified	To be confirmed	£10k-£50k	Implementation	No data	Number of responses to survey, hits on website, data captured. Changed behaviour identified from repeat survey in future	Gen public baseline AQ Survey, followed by 2 targeted surveys with HoW college and local schools in 2024. School assemblies ran until December 2025 and plans to engage with schools for future assemblies. Developed toolkit for primary schools with UoW.	AQ Toolkit available for schools to download from WRS website
4	Clean Air Day	Promoting Travel Alternatives	Other	N/a	2024 - 2027	WRS	Not yet identified	To be confirmed	<£10k	Feedback	N/a	Feedback and engagement	Undertaken each year	Funding availability

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[1], 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.

There were no automatic $PM_{2.5}$ monitoring stations in Worcestershire in 2025 that were recognised by Defra for measuring against ambient air quality directives. The nearest AURN $PM_{2.5}$ monitoring station is the Birmingham Ladywood site approximately 28km north of the Redditch Borough. As part of the Defra AURN expansion project a $PM_{2.5}$ monitor is anticipated to be installed in Redditch 2026 at Woodrow. However, work for this is still ongoing and further progress on this monitoring station will be reported on in next year's ASR.

WRS has reviewed the DEFRA national background maps to determine projected $PM_{2.5}$ concentrations within the Redditch borough area for the 2025 calendar year. The average total $PM_{2.5}$ at the 54 locations (centre points 1km x 1km grids) across the Redditch Borough is 6.4µg/m^3 with the lowest concentration of 5.81µg/m^3 and the highest concentration being 7.53µg/m^3. $PM_{2.5}$ concentrations within the Redditch Borough are well below the annual average EU limit value for $PM_{2.5}$ of 25µg/m^3 and are below the proposed annual average limit value for $PM_{2.5}$ target of 10µg/m^3 across England by 2040.

Two low-cost real time air quality monitors offering publicly accessible real time monitoring data were deployed within Redditch Borough in 2025. These were relocated from original positions at beginning of August 2025 to two new locations. Cherry Tree Walk and 44 Guinness Close were both selected as new sites, due to them being identified as areas of deprivation downwind from area of affluence – where solid fuel burners are anticipated to be more commonplace, based on known studies.

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

The sensors, known as 'Zephyrs' provide data on a range of pollutants including PM_1, $PM_{2.5}$ and PM_{10}.Graphical results for 2025 are shown in the appendices and $PM_{2.5}$ averages for 2024 and 2025 are summarised in table below:

Table 2.3 – Low-Cost Sensor Annual $PM_{2.5}$ Annual Averages

Location	2024 average $PM_{2.5}$ ($\mu g/m^3$)	2025 average $PM_{2.5}$ ($\mu g/m^3$)	Installation
Meadowhill Road	6.97	9.4	January 2024
Rickyard lane	6.57	5.86	January 2024
Cherry Tree Walk Road	<->	4.68	August 2025
44 Guiness Close	<->	4.52	August 2025

These low-cost sensors have been certified as suitable for indicative monitoring for particulate matter within the UK using the Environment Agency's Indicative instrument certification scheme (MCERTS). However, the following advice from Defra is acknowledged: 'While low-cost sensors can provide useful indicative data, at present they are not approved for use in statutory legal reporting (LAQM) of data against the National air quality objectives as they are not accurate enough to meet the expanded uncertainty requirements of equivalent [scientific reference] instruments.'

The measured data from the low-cost sensor network and Defra background pollution maps indicate that $PM_{2.5}$ concentrations within the Redditch District are below the interim and legally binding targets set out in the Air Quality Strategy (England) 2023:

Table 2.4 – $PM_{2.5}$ Legally Binding Targets

Pollutant and Metric	Target	Target Year
$PM_{2.5}$ annual mean concentration	Interim target: 12µg/m^3	2028
$PM_{2.5}$ annual mean concentration	Legally binding target: 10µg/m^3	2040

WRS has reviewed the fraction of mortality attributable to particulate air pollution published by the Department of Health & Social Care. The estimated fraction of mortality attributable to particulate air pollution in Redditch in 2024 (most recent year available) was 5.1%. This is below the national figure for England (5.3% in 2024) and the Redditch figure is lower than the West Midlands figure (5.3% for 2024).

Fingertips | Department of Health and Social Care

More information on the Public Health Outcomes Frameworks that examines indicators that help to understand the trends in public health can be found at Public Health Outcomes Framework - OHID (phe.org.uk)

There are currently no declared smoke control areas operating within the Redditch Borough. More information, maps, and guides on the types of fuels that can be used can be found at:

Smoke Control Areas | Worcestershire Regulatory Services (worcsregservices.gov.uk)

WRS hold 19 records of complaints of nuisance from smoke in the Redditch Borough District in 2025, most of which relate to bonfires or burning of other waste or other enquires. A total of 3 of the records of complaints are attributable to wood burning stoves in residential developments, advice was given to offenders and no repeat complaints have been recorded.

In light of the above no additional actions are currently planned by Redditch Borough Council in relation to the reduction of $PM_{2.5}$ levels. However, it is anticipated that any actions taken to improve NO_2 levels across the region will likely result in a linked improvement in $PM_{2.5}$ levels.

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

This section sets out the monitoring undertaken within 2025 by Redditch Borough Council and how it compares with the relevant air quality objectives. In addition, monitoring results are presented for a five-year period between 2021 and 2025 to allow monitoring trends to be identified and discussed.

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

No automatic (continuous) monitoring that are recognised by Defra for measuring against ambient air quality directives was undertaken within the Redditch Borough Council area during 2025.

3.1.2 Non-Automatic Monitoring Sites

Redditch Borough Council undertook non- automatic (i.e. passive) monitoring of NO_2 at 7 sites during 2025. Table A.1 in Appendix A presents the details of the non-automatic sites.

Maps showing the location of the monitoring sites are provided in Appendix D. 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.2 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 2025 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.

Monitoring results within the Redditch Borough area demonstrate that there were no exceedances of the NO_2 air quality objective of 40µg/m^3 in 2025. Three of the four historic monitoring sites have shown a slight increase from 2024 to 2025 while one (OR1) has shown a slight decrease.

The largest increase was 1.0µg/m^3 which was recorded at SS, this saw a rise from 14.9µg/m^3 to 15.9µg/m^3.

The largest decrease of 2.7µg/m^3 was recorded at location OR1, with concentrations reducing from 29.0µg/m^3 to 26.3µg/m^3.

The lowest concentration was 10.7µg/m^3 recorded at STOR.

Two new monitoring sites were added to the monitoring network in 2025 – 64UH and 397BR, both of which are below NO_2 air quality objective of 40µg/m^3 (35.3 µg/m^3 and 12.6 µg/m^3 respectively). Some tubes were removed at the start of 2026, which will be reported on in the 2026 ASR.

No annual means greater than 60µg/m^3 have been recorded indicating it is extremely unlikely that there have been any exceedances of the 1-hour mean objective for NO_2 at any monitoring sites.

3.2.2 Particulate Matter (PM_{10})

There were no automatic PM_{10} monitoring stations within the Redditch Borough in 2025 that were recognised by Defra for measuring against ambient air quality directives.

3.2.3 Particulate Matter ($PM_{2.5}$)

There were no $PM_{2.5}$ monitoring stations within the Redditch Borough in 2024 that were recognised by Defra for measuring against ambient air quality directives.

3.2.4 Sulphur Dioxide (SO_2)

SO_2 is not monitored within the Redditch Borough area.

Appendix A: Monitoring Results

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

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
OR2	14 Other Road, B98 8DY	Roadside	404620	267495	NO2	NO	0.0	3.0	No	2.1
OR5	Other Road Misty Florist, B98 8DY	Roadside	404629	267467	NO2	NO	0.0	4.0	No	2.0
SS	7 Summer Street B98 7BD	Suburban	404376	267242	NO2	NO	0.0	2.6	No	2.0
STOR	Lampost opposite 18 Washford Lane, B98 0HY	Urban Background	265783	265783	NO2	NO	14.6	0.8	No	2.2
64UH	Sunset Cocktail Bar, Golden Cross 64 Unicorn Hill, Redditch, B97 4RA	Roadside	403862	267600	NO2	NO	0.0	1.4	No	1.9
397BR	397 Birmingham Road, Alvechurch, Redditch, B97 6RH	Roadside	403962	269915	NO2	NO	0.0		No	1.8
OR1	Other Road B98 8DY Street Light 2237	Roadside	404599	267542	NO2	NO	3.0	1.5	No	2.4

Notes:

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

(2) N/A if not applicable.

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

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2025 (%) (2)	2021	2022	2023	2024	2025
OR2	404620	267495	Roadside	100.0	99.7	28.8	33.1	29.5	30.1	30.8
OR5	404629	267467	Roadside	91.6	89.9	27.5	30.4	28.0	27.7	28.6
SS	404376	267242	Suburban	100.0	99.7	13.2	18.0	14.8	14.9	15.9
STOR	265783	265783	Urban Background	91.6	90.1	9.3	11.6	9.8	10.5	10.7
64UH	403862	267600	Roadside	83.3	82.7					35.3
397BR	403962	269915	Roadside	83.3	84.7					12.6
OR1	404599	267542	Roadside	83.3	82.5	26.3	28.6	26.6	29.0	26.3

☒ **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**.

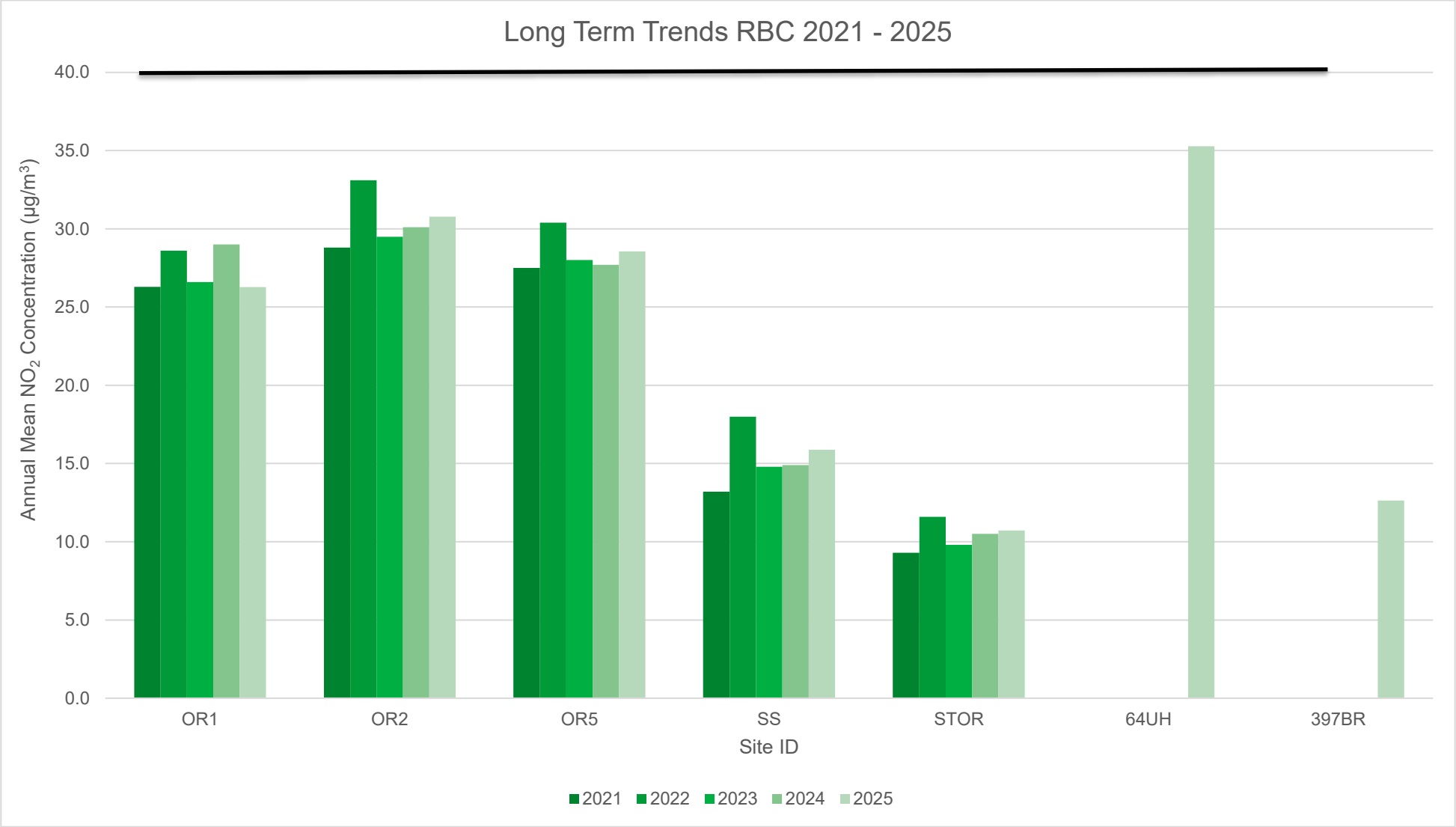
Means for diffusion tubes have been corrected for bias. All means have been “annualised” as per LAQM.TG22 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

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



Appendix B: Full Monthly Diffusion Tube Results for 2025

Table B.1 – NO_2 2025 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 <(x.x)>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
OR2	404620	267495	28.5	36.9	36.7	38.8	28.9	22.2	22.3	22.5	30.4	25.5	30.6	27.6	29.2	30.8	-	
OR5	404629	267467	27.2	35.8	34.1	35.1	28.3	18.5	21.1	27.7	24.5	14.3	32.0		27.1	28.6	-	
SS	404376	267242	18.9	20.5	18.9	16.0	10.2	8.8	9.2	25.2	13.1	8.6	17.4	14.3	15.1	15.9	-	
STOR	265783	265783	12.2	14.8	13.1	9.4	6.5	6.7	6.4	10.7	8.1		11.7	12.4	10.2	10.7	-	
64UH	403862	267600		48.4	33.6	31.7	29.0	31.9	24.9	31.3	35.2		37.4	31.8	33.5	35.3	-	
397BR	403962	269915			15.7	14.9	9.5	7.3	9.0	11.4	11.9	11.9	14.9	13.6	12.0	12.6	-	
OR1	404599	267542	30.7	29.6	27.4			23.8	20.3		27.4	24.5	29.5	26.8	25.0	26.3	-	

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

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

☒ **Local bias adjustment factor used.**

☐ **National bias adjustment factor used.**

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

☒ **Redditch borough Council confirm that all 2025 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 Redditch Borough Council During 2025

No additional significant sources have been identified for the reporting year of 2025.

Additional Air Quality Works Undertaken by Redditch Borough Council During 2025

Redditch Borough Council has not completed any additional works within the reporting year of 2025.

QA/QC of Diffusion Tube Monitoring

The following UKAS accredited company provided Redditch Borough Council with nitrogen dioxide tubes and analysis in 2025:

Gradko International Limited

St Martins House

77 Wales Street

Winchester

SO23 0RH

diffusion@gradko.com

The 20% Triethanolamine (TEA)/ De-ionised Water preparation method is used.

Gradko International Limited participate in the AIR NO_2 Proficiency Testing Scheme (AIR-PT).

All monitoring undertaken has been completed in accordance with the 2025 Diffusion Tube Monitoring Calendar, i.e. on or within ± days of the specified date.

Diffusion Tube Bias Adjustment Factors

The diffusion tube data presented within the 2025 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.

Redditch Borough Council have used a local bias adjustment factor of 1.05 to the 2025 monitoring data, this has been calculated using the 'Diffusion Tube Data Processing Tool spreadsheet'. The calculation details have also been provided in 'Table C.3 – Local Bias Adjustment Calculation'.

WRS has determined the appropriate local bias adjustment factor utilising the Diffusion Tube Data Processing Tool v6.0. The site used was the colocation study at Wyre Forest House, Kidderminster which is the head office for WRS. The installation is collocated with three diffusion tubes and is largely run and managed for the purpose of undertaking a local bias adjustment factor for the county. WRS are responsible for maintaining the monitoring network across the six-district councils within Worcestershire and therefore the handling and processing of the diffusion tubes is the same for each area.

The local bias adjustment factor has been utilised again for this assessment as it is more conservative compared with the national bias adjustment factor (0.89, Defra published National Diffusion Tube Bias Adjustment Spreadsheet Version 03/26). This approach is consistent with the previous three ASRs and undertaken, following consultation with Defra LAQM helpdesk and technical guidance.

A summary of bias adjustment factors used by Redditch Borough Council over the past five years is presented in Table C.12.

Diffusion Tube Annualisation

All diffusion tube monitoring locations within Redditch Borough Council recorded data capture of 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.

Table C.1 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2025	Local	-	1.05
2024	Local	-	1.03
2023	Local	-	0.96
2022	Local	-	0.97
2021	National	03/22	0.84

Table C.2 – Local Bias Adjustment Calculation

	Local Bias Adjustment Input 1	Local Bias Adjustment Input 2	Local Bias Adjustment Input 3	Local Bias Adjustment Input 4	Local Bias Adjustment Input 5
Periods used to calculate bias	12				
Bias Factor A	1.05 (1 – 1.11)				
Bias Factor B	-5% (-10% - 0%)				
Diffusion Tube Mean (µg/m^3)	12.2				
Mean CV (Precision)	3.2%				
Automatic Mean (µg/m^3)	13.0				
Data Capture	98%				
Adjusted Tube Mean (µg/m^3)	13 (12 – 14)				

Notes:

A single local bias adjustment factor has been used to bias adjust the 2025 diffusion tube results.

NO_2 Fall-off with Distance from the Road

Wherever possible, monitoring locations are representative of exposure. However, where this is not possible, the NO_2 concentration at the nearest location relevant for exposure has been estimated using the Diffusion Tube Data Processing Tool/NO_2 fall-off with distance calculator available on the LAQM Support website. Where appropriate, non-automatic annual mean NO_2 concentrations corrected for distance are presented in Table B.1.

QA/QC of Automatic Monitoring

No automatic monitoring was undertaken in Redditch Borough Council.

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.

Summary of Low-Cost Air Quality Sensor Monitoring

Table C.3– Details of Low-Cost Sensor Sites

Site ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	Sensor Type	In AQMA?	Which AQMA? (1)	Distance to Relevant Exposure (m) (1,2)	Distance to kerb of nearest road (m) (1)	Inlet Height (m)
1558 (a)	25 Meadowhill Road	<Roadside>	404654	268295	NO_2, PM_{10}, $PM_{2.5}$	Earthsense Zephyr	NO	-	9	0	2.35
1558 (b)	32 Cherry Tree Walk	<Urban Background>	402677	267571	NO_2, PM_{10}, $PM_{2.5}$	Earthsense Zephyr	NO	-	8	0.5	2.35
1553 (a)	Rickyard Lane	Roadside	406700	268222	NO_2, PM_{10}, $PM_{2.5}$	Earthsense Zephyr	NO	-	0.8	10	2.35
1553 (b)	44 Guiness Close	Urban Background	403881	265737	NO_2, PM_{10}, $PM_{2.5}$	Earthsense Zephyr	NO	-	10.13	0.3	2.35

Table C.4– Monthly Air Quality Sensor Monitoring Results NO_2

Site 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 Data
1558 (a)	404654	268295	32.9253	25.4733	23.2660	14.1580	10.0008	7.72209	7.84154	-	-	-	-	-	17.3410
1558(b)	402677	267571	-	-	-	-	-	-	-	7.33161	10.8109	14.6237	17.6156	20.4984	14.1760
1553(a)	406700	268222	24.2639	21.5089	19.2090	14.7928	12.6823	10.0828	-	-	-	-	-	-	17.09
1553(b)	403881	265737	-	-	-	-	-	-	11.5447	14.2691	16.2275	18.7196	21.0281		16.3578

Table C.5- Monthly Air Quality Sensor Monitoring Results $PM_{2.5}$

Site 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 Data
1558 (a)	404654	268295	11.5891	12.5681	13.9468	10.0108	6.78494	5.59609	5.43629	-	-	-	-	-	9.41889
1558(b)	402677	267571	-	-	-	-	-	-	-	5.46580	3.58144	5.53559	4.00420	4.80088	4.67758
1553(a)	406700	268222	6.41915	6.37864	7.96978	5.30841	5.90219	3.16152	-	-	-	-	-	-	5.85661
1553(b)	403881	265737	-	-	-	-	-	-	-	4.33540	3.565	5.38700	4.28720	5.03670	4.52226

Table C.6– Monthly Air Quality Sensor Monitoring Results PM_{10}

Site 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 Data
1558 (a)	404654	268295	17.2878	19.1308	20.7166	14.2945	9.27556	7.84187	7.59965	-	-	-	-	-	13.7352
1558(b)	402677	267571	-	-	-	-	-	-	-	7.61741	5.85963	9.03864	7.28009	8.58721	7.67660
1553(a)	406700	268222	10.4863	10.4880	12.7610	7.74408	8.32294	5.07392	-	-	-	-	-	-	9.14605
1553(b)	403881	265737	-	-	-	-	-	-	-	6.18637	5.81402	8.81344	7.33801	8.77856	7.67660

Appendix D: Monitoring Locations

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

Figure D.2 – Map of Non-Automatic Monitoring Site: SS

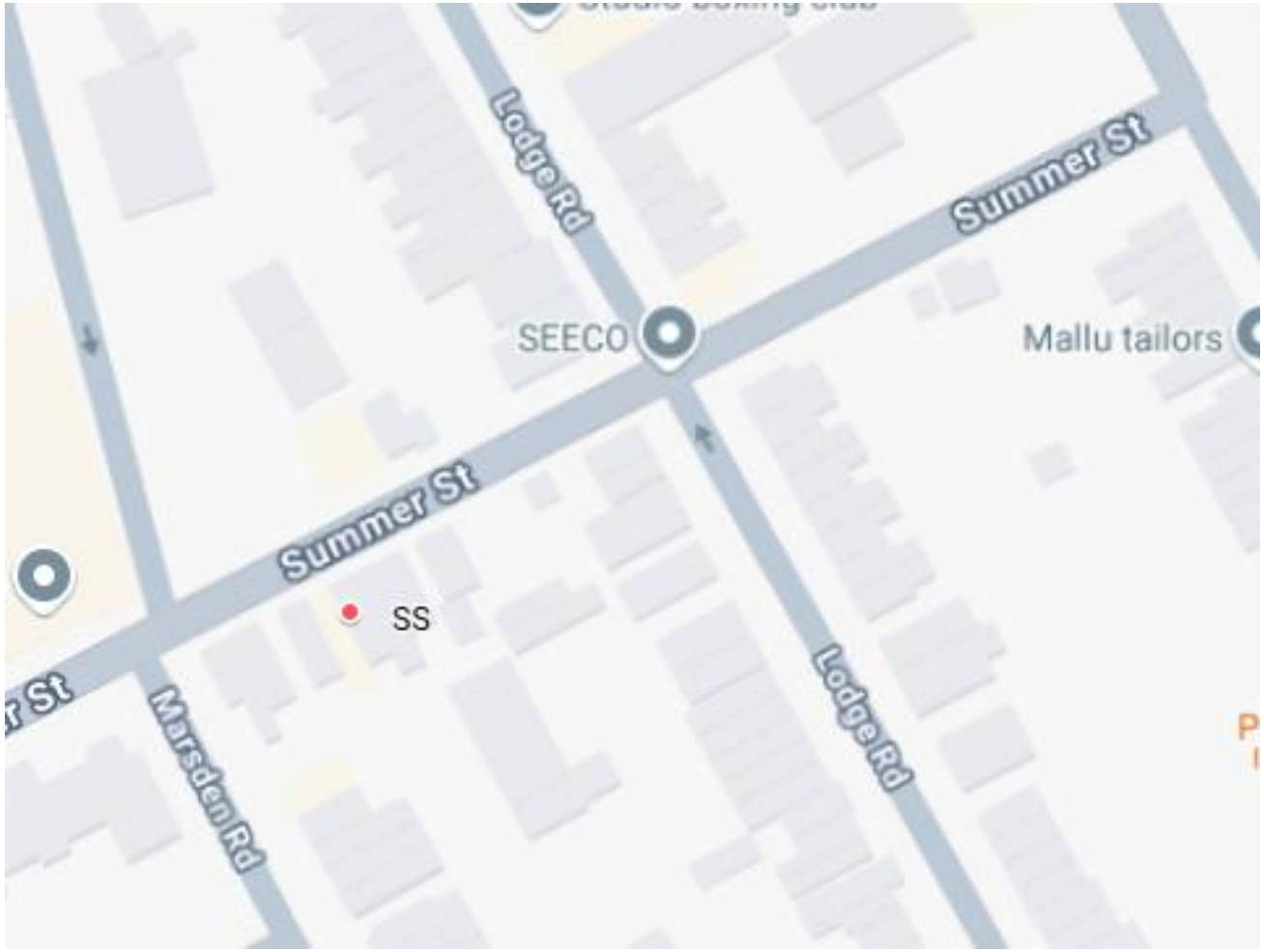


Figure D.3 – Map of Non-Automatic Monitoring Site: OR1, OR2 and OR5

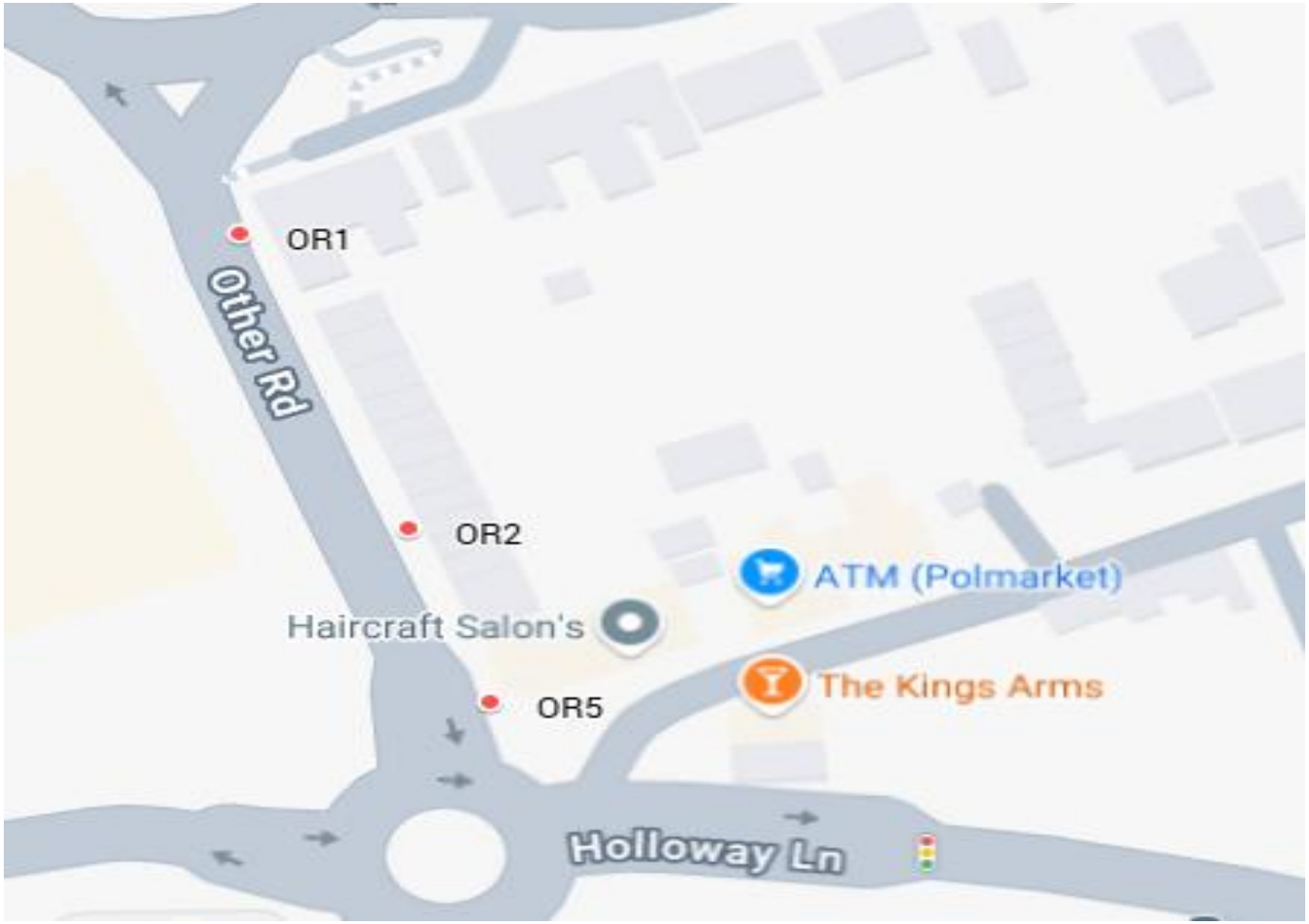


Figure D.4 – Map of Non-Automatic Monitoring Site: 64UH

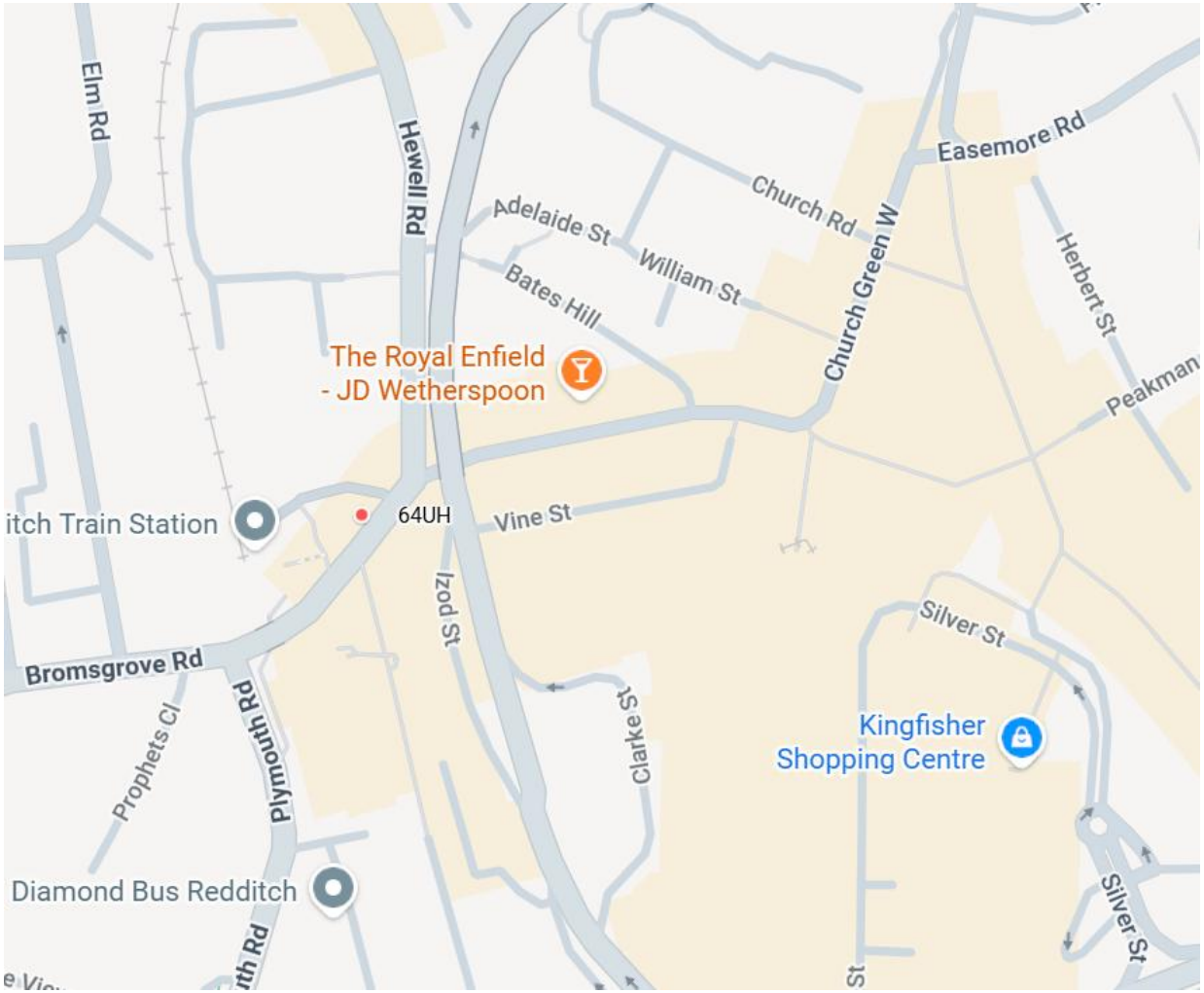


Figure D.4 – Map of Non-Automatic Monitoring Site: 397BR

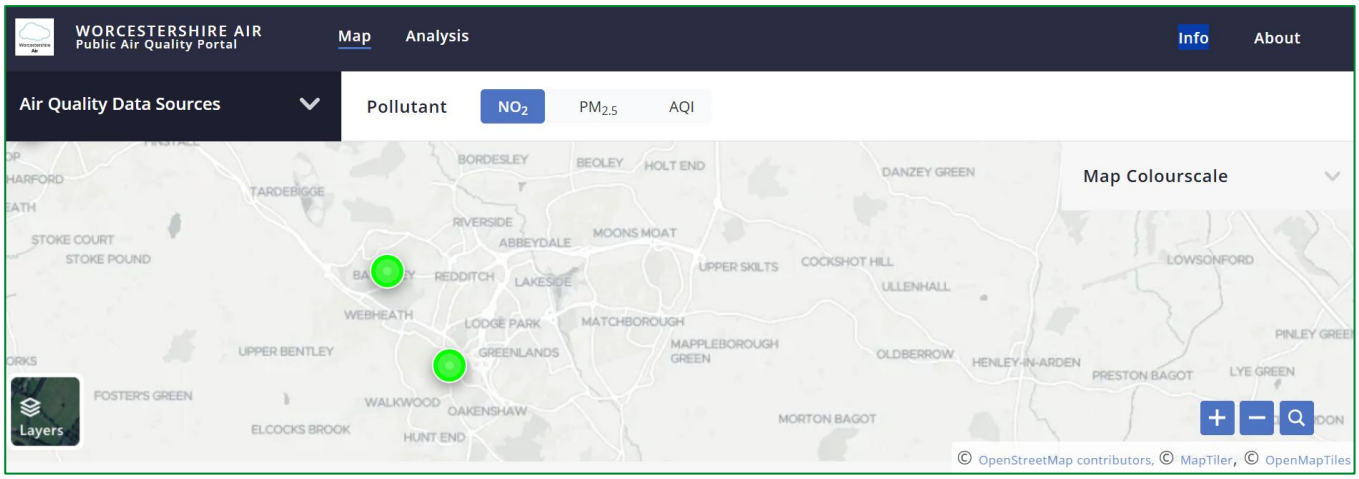
Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England[2]

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

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

Appendix F: Low-cost Sensor Annual Reports



Public Portal: [Worcestershire Air | EarthSense]

Project Information

Real time air quality monitoring for 3-year period funded by Defra Air Quality Grant (2022-23) and 10% match funding by each Worcestershire district council. Low-cost sensors (Zephyrs) installed and maintained by Earthsense who also provide real time data portal. Sensors were installed between January and May 2024.

General information

Zephyrs are one of the available low-cost sensors that have been certified as suitable for indicative monitoring for particulate matter within the UK using the Environment Agency's Indicative instrument certification scheme (MCERTS).

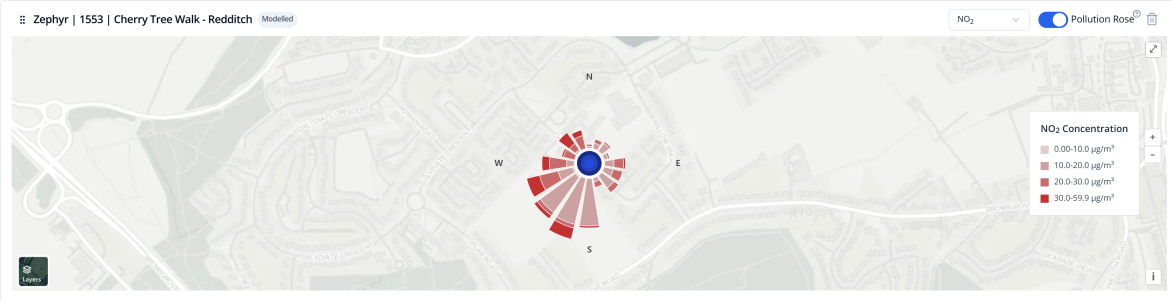
These low-cost sensors have been certified as suitable for indicative monitoring for particulate matter within the UK using the Environment Agency's Indicative instrument certification scheme (MCERTS). However, the following advice from Defra is acknowledged: 'While low-cost sensors can provide useful indicative data, at present they are not approved for use in statutory legal reporting (LAQM) of data against the National air quality objectives as they are not accurate enough to meet the expanded uncertainty requirements of equivalent [scientific reference] instruments.

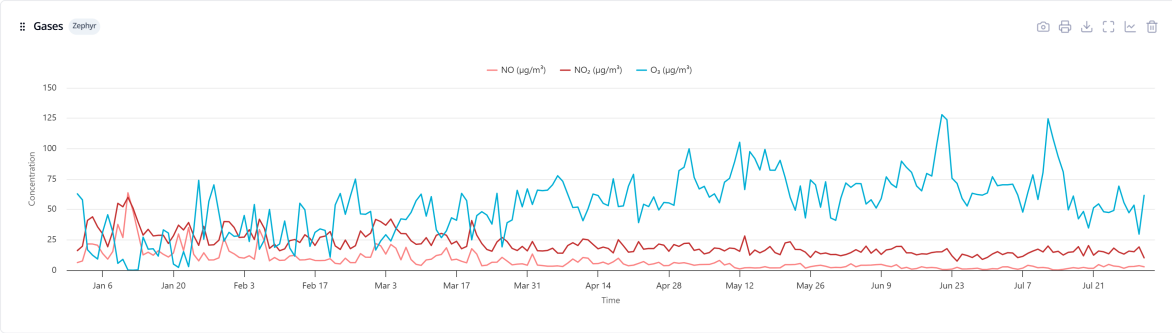
MyAir Analysis Report

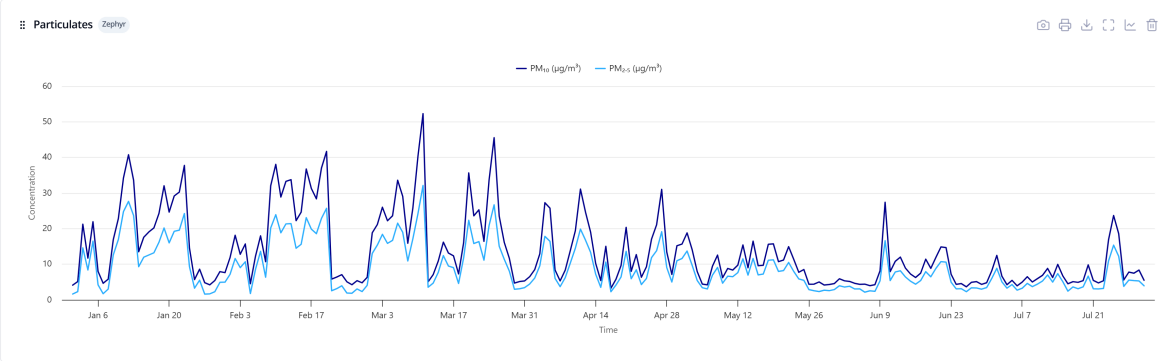
Device: Meadowhill Road - Redditch

Time Period: 1 Jan 2025 - 1 Aug 2025

Time Average: 24 Hour





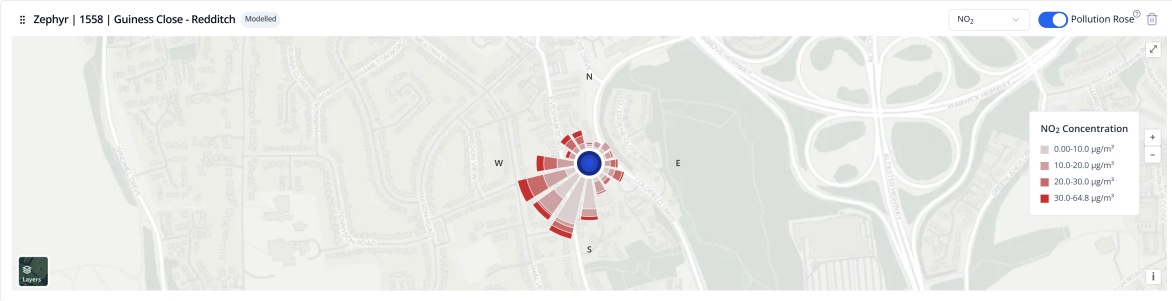


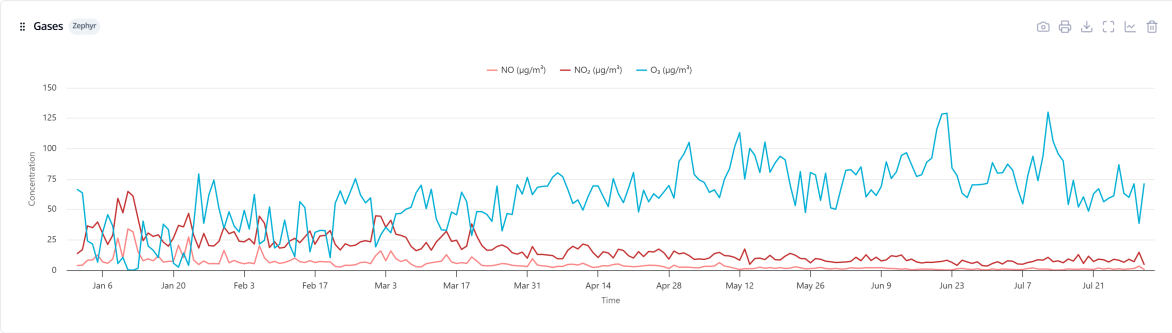
MyAir Analysis Report

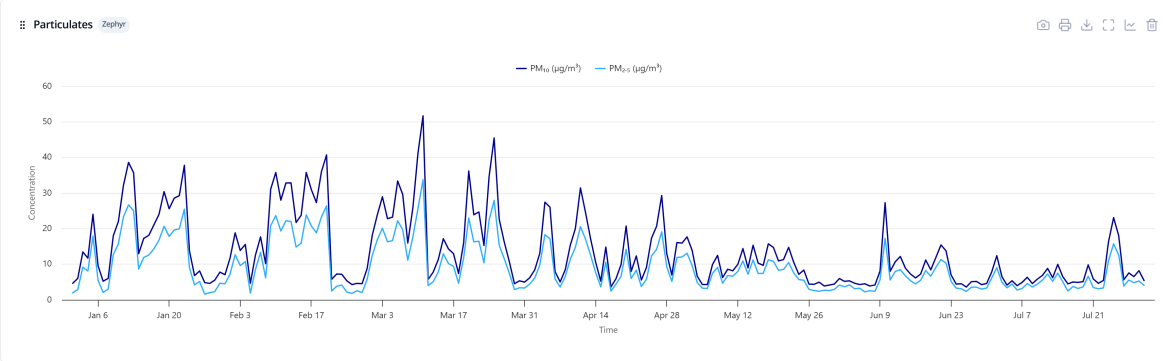
Device: Rickyard Lane - Redditch

Time Period: 1 Jan 2025 - 1 Aug 2025

Time Average: 24 Hour





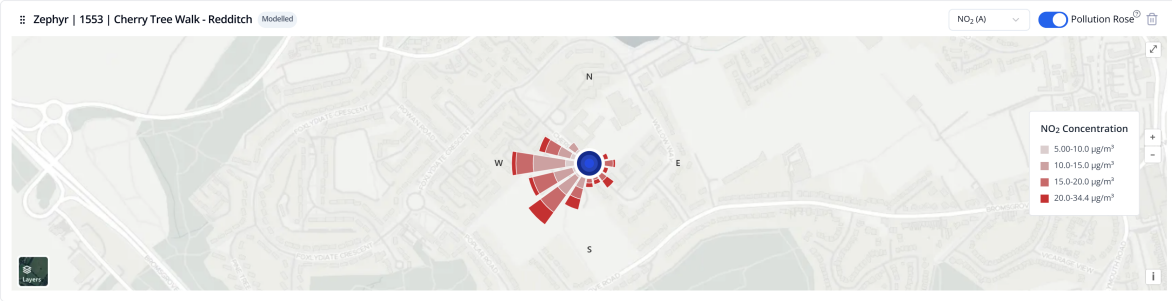


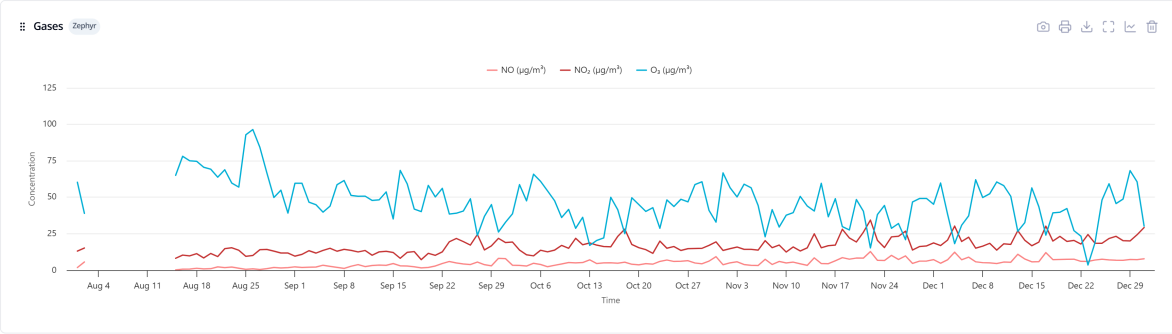
MyAir Analysis Report

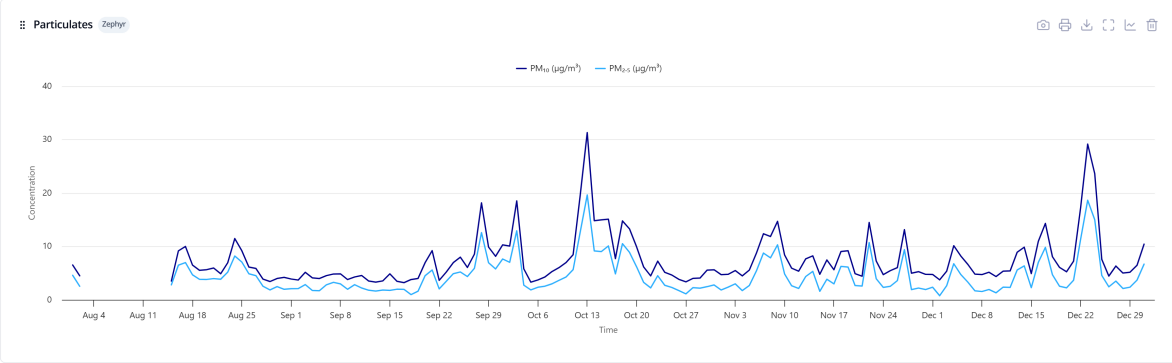
Device: Cherry Tree Walk - Redditch

Time Period: 1 Aug 2025 - 1 Jan 2026

Time Average: 24 Hour





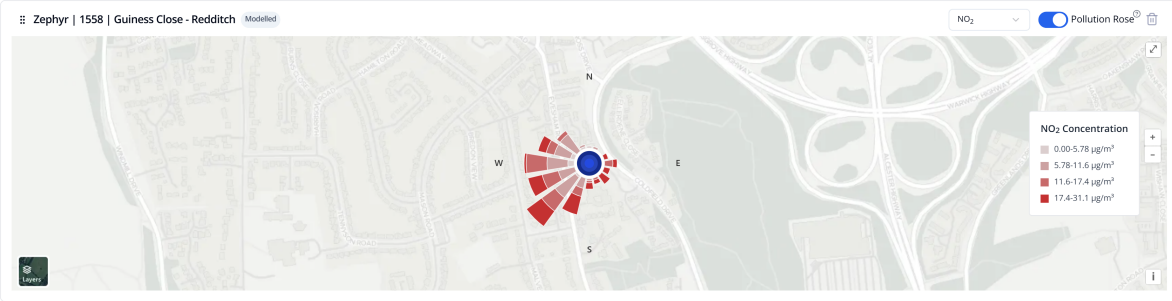


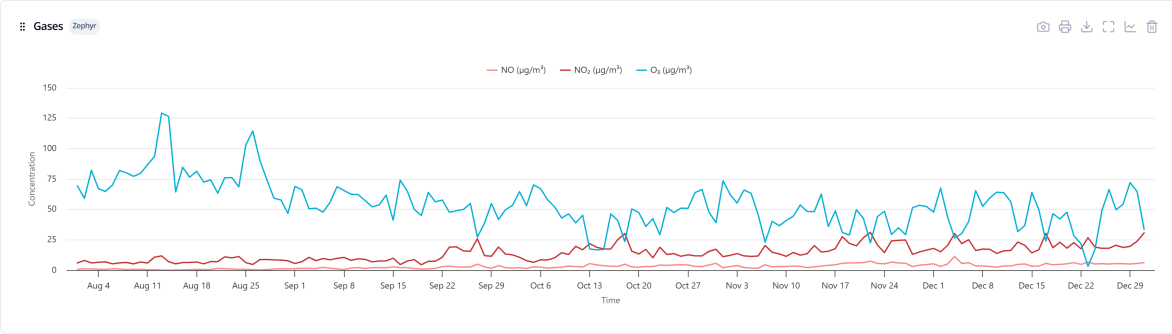
MyAir Analysis Report

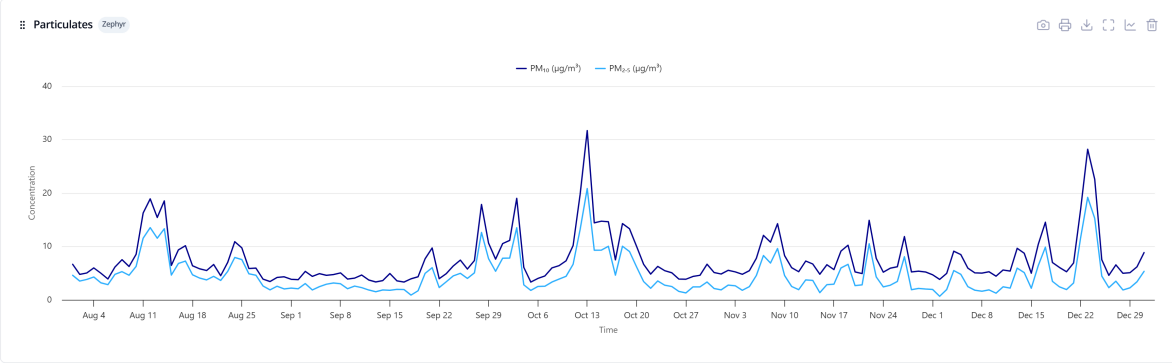
Device: Guiness Close - Redditch

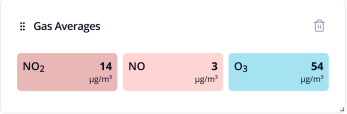
Time Period: 1 Aug 2025 - 1 Jan 2026

Time Average: 24 Hour









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
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.