



**Crowthorne Air Quality Management Area
Proposal for Revocation Report
In fulfilment of Part IV of the Environment Act 1995 Local
Air Quality Management**

Date: October 2025

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Report Reference Number	BFBC Crowthorne AQMA Revoke 2025
Date	2025 Report prepared by PPP on behalf of Bracknell Forest Council

Contents

Contents	3
1 Introduction	4
2 Local Air Quality Management	4
2.1 Review and Assessment of Air Quality	4
2.2 Health Impacts	5
2.3 Current Air Quality Management Area Status	5
2.4 Requirements for revoking an Air Quality Management Area (AQMA)	5
3 AQMA Crowthorne	6
3.1 The AQMA	6
3.2 The Nitrogen Dioxide Levels	6
3.2.1 Figure 1: Diffusion Tube NO ₂ Levels in the Crowthorne AQMA from 2019 to 2024. 7	
3.3 Monitoring	7
3.4 2025 Monitoring	7
4 Ongoing measure to improve the local Air Quality	8
4.1 Highways and Electric Vehicle chargers	8
4.2 Community Events	9
5 Current Borough Wide Monitoring	12
6 Bracknell Forest Council Consultation	13
7 References and Papers	13
8 Appendix A	14
Map 1: The Crowthorne AQMA	14
8.1 Map 2: The Crowthorne AQMA (South) diffusion tube monitoring location.	15
8.2 Map 3: The Crowthorne AQMA (North) diffusion tube monitoring locations	16
Appendix B:	17
QA/QC for the Diffusion Tubes and Continuous Monitor	17
QA/QC Diffusion Tubes	17
Table B.1 – Bias Adjustment Factor	18

1 Introduction

This report was produced on behalf of Bracknell Forest Council constitutes the required information under which the Council is to apply for the revocation of the Area Quality Management (AQMA) area known as Crowthorne.

The AQMA revocation report has been developed in recognition of the legal requirement on the local authority to work towards the Air Quality Strategy (AQS) objectives under Part IV of the Environment Act 1995 and the relevant Regulations made under that part and to meet the requirements of the Local Air Quality Management (LAQM) statutory process.

This report will provide the Council with robust evidence as required under the LAQM guidance, LAQM.TG (22) to enable it to revoke the AQMA.

2 Local Air Quality Management

2.1 Review and Assessment of Air Quality

Under the Environment Act 1995 local authorities are required to review and assess local air quality annually against national air quality objectives. This process sits under the Local Air Quality Management (LAQM) programme which requires local authorities to report annually to the department for Environment, Food and Rural Affairs (DEFRA).

The air quality objectives applicable to LAQM in England are set out in the Air Quality Standard Regulations 2010. The pollutant of concern for this AQMA is for the annual mean objective Nitrogen Dioxide only and the limits are set out in Table 1 below.

Table 1: The National NO₂ Air Quality Objectives

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)	Annual mean 40µg/m ³	Annual mean

2.2 Health Impacts

Air pollution is associated with several adverse health impacts. It is recognised as a contributing factor in the onset of heart disease and cancer. Air Pollution can be harmful to everyone, it mainly affects particularly affects the most vulnerable in society: children, the elderly, and those with existing heart and lung conditions. There is also often a strong correlation with equalities issues because areas with poor air quality are also often less affluent areas^{1,2}.

Poor Air Quality is also a contributory role in mortality. The mortality burden of air pollution within the UK is equivalent to 29,000 to 43,000 deaths at typical ages³, with a total estimated healthcare cost to the NHS and social care of £157 million in 2017⁴.

The major source of air quality pollutants in Bracknell Forest is road transport, and the main pollutant of concern is nitrogen dioxide (NO₂). The Air Quality Management Area (AQMA) has been declared for exceedances of the Annual Mean NO₂ Objective (Table 1). The Crowthorne AQMA is located in Crowthorne, and includes Part B3348, High Street & part of Sandhurst Road (See Appendix A for the map).

2.3 Current Air Quality Management Area Status

In the comments from the June 2025 Annual Status Report (ASR) (data from 2024) for Bracknell Forest BC DEFRA has approved the recommendation made for the revocation of the Crowthorne AQMA as it has recorded annual levels at or below 36.0 µg/m³ for 3 continuous years.

2.4 Requirements for revoking an Air Quality Management Area (AQMA)

The process for the revoking an AQMA is set out in the DEFRA Local Air Quality Management Policy and Technical Guidance (22). It states that:

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

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

³ Defra. Air quality appraisal: damage cost guidance, January 2023

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

“3.57 The revocation of an AQMA should be considered following three consecutive years of compliance with the relevant objective as evidenced through monitoring. Where NO₂ monitoring is completed using diffusion tubes, to account for the inherent uncertainty associated with the monitoring method, it is recommended that revocation of an AQMA should be considered following three consecutive years of annual mean NO₂ concentrations being lower than 36µg/m³ (i.e. within 10% of the annual mean NO₂ objective). There should not be any declared AQMAs for which compliance with the relevant objective has been achieved for a consecutive five-year period.”

Therefore as Bracknell Forest Council has robust monitoring data for the Crowthorne AQMA, that has recorded annual levels at or below 36.0 µg/m³ for 3 continuous years it can be revoked.

3 AQMA Crowthorne

3.1 The AQMA

The Crowthorne AQMA was declared for the NO₂ annual mean in 2011 and was designated along part B3348, High Street & part of Sandhurst Road (Map 1).

3.2 The Nitrogen Dioxide Levels

The nitrogen dioxide levels for the Crowthorne AQMA, have been monitored using diffusion tubes at 5 sites, 2 of which are triplicate (see Appendix A Map 2). The diffusion tubes sites are located as follows:

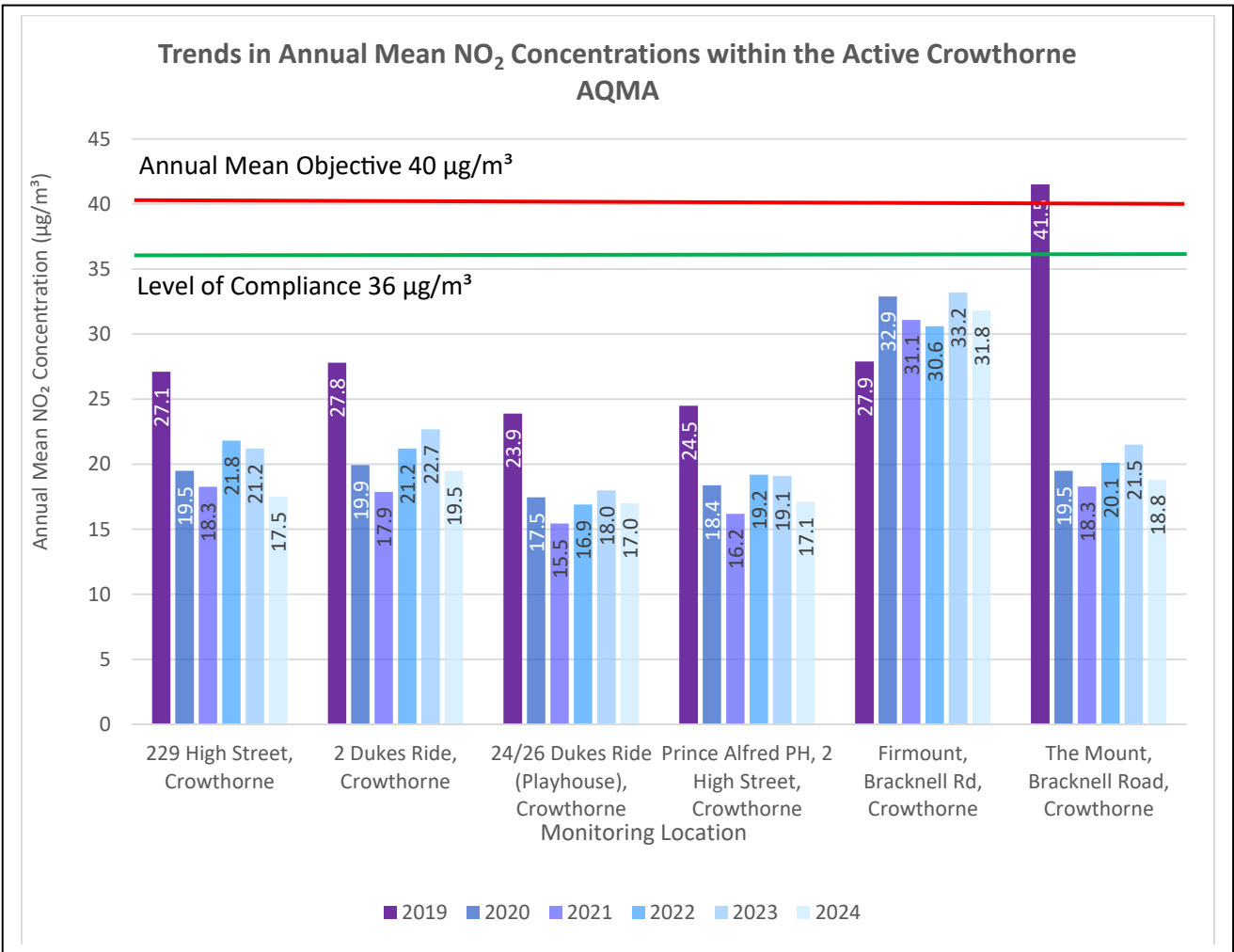
- 40C - 229 High Street, Crowthorne
- 76C - Dukes Rides, Crowthorne
- 84C - 24/26 Dukes Ride (Playhouse), Crowthorne
- 93C - Prince Alfred Public House, High Street, Crowthorne
- 58x, 58y, 58z C - 2 Firmount, Bracknell Road, Crowthorne
- 91x, 91y, 91z C - The Mount, Bracknell Road, Crowthorne

The results have been below 36.0µg/m³ for the past 5 years, in all 6 of the diffusion tube locations (Map 3). Whilst the NO₂ had started to rise marginally in 2022 and 2023, in 2025 all the levels went below those recorded in 2020, (as shown in Figure 1 below).

A number of factors may attribute to this reduction in NO₂, including the change in traffic trends during the day, for example peak traffic is typically slightly lower than pre-pandemic, but traffic during the inter-peak hours is higher, consequently there is less congestion and queuing within the AQMA. There has also been an increase in LGVs, making up for a decrease in car traffic.

This is likely partly attributable to increased homeworking, but also increased home deliveries. The residents have been upgrading their cars to hybrids and electric, as more opportunities have been made available to company and private leasing.

3.2.1 Figure 1: Diffusion Tube NO₂ Levels in the Crowthorne AQMA from 2019 to 2024.



3.3 Monitoring

Monitoring will continue for NO₂ at the sites using diffusion tubes as advised in LAQM.TG (22) to ensure that the levels remain at 36.0µg/m³ or below, for the next 3 years.

3.4 2025 Monitoring

Throughout 2025 the 6 diffusion tubes site within the AQMA have remained in place. The results from the diffusion tubes will not be known until they have been bias corrected after the end of the full monitoring year. However, they are predicted to be below 36µg/m³ from analysis and comparison with 2024 data.

4 Ongoing measure to improve the local Air Quality

In addition to working to reduce and maintain NO₂ concentrations below the annual objective in all areas of the Borough, we will continue to assess planning applications to ensure that future developments and changes to the road networks across the Borough do not lead to an increase in the NO₂ concentration above the annual mean objective of 40µg/m³. We will also continue to regulate PPC installations to ensure that emission limits are not exceeded and the regulation of smoke control and waste burning to reduce impacts on local air quality. We will continue to provide our Anti-Idling Schools Kit to the local Primary's as well as running Clean Air Day, and other campaigns which help improve our air quality, ([air-quality-school-toolkit-final-version-1-003.pdf](#) (publicprotectionpartnership.org.uk)).

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

- All the Environmental Permits have been inspected in line with the Environment Permitting Regulations.

4.1 Highways and Electric Vehicle chargers

- BFBC drafted a new Local Transport Plan (LTP4) for the Borough in 2024, which sets out our plans, policies and ambitions for the transport network over the next 10 years and beyond, with a core focus on decarbonisation, improving air quality and using our networks more efficiently. This is set to be formally approved and adopted by Council in July 2025.
- Further upgrades to traffic signals, complementing capacity and junction improvements along the A322, A329 and A3095 corridors (all completed within the past 10 years) which have improved journey times, reduced congestion and had a positive overall impact on air quality, as seen in the reductions at the A322 Downshire Way AQMA monitoring station. In turn, this will support the continued growth of Bracknell as an employment centre and further residential growth across the region.
- Installation of 38 fast 22kw Electric Vehicle chargepoints across 12 council owned car parks. A dual 75kw rapid chargepoint was also installed at Great Hollands in late 2023/early 2024. These have been supplemented by a new 50kw and 150kw at Birch Hill (Leppington) to provide local residents without off-street parking with opportunities to charge EVs at local community facilities.

- New stricter planning requirements have been adopted requiring EV chargepoints in all new developments (Building Regs Part-S).
- Work has commenced with guidance from the Energy Saving Trust and Office for Zero Emission Vehicles on a plan for further major roll-out of EV chargepoints in residential areas using LEVI funding. We are going out to market in Summer 2025 with a view to securing a provider to deliver 400+ on-street chargepoints.
- A Berkshire EV working group has been established which was initially set up by BFC and now has a dedicated project manager to coordinate further EV roll-out across Berkshire in particular using LEVI funding.
- Continuing to work with Bracknell BID to encourage more sustainable travel; A new shuttle bus service was launched in 2023 linking Bracknell rail station with the BID area, along with a cycle hire scheme for employees. White lines indicating pedestrian/cycle paths have also been further refreshed and new signage added.
- A new pedestrian crossing has been installed on Temple Way to provide safer links to the new Blue Mountain development and new schools and community facility. New crossings have also been installed on Broad Lane, Cambridge Road and Birch Hill Road. This will encourage more people to walk the shorter distance to the facility instead of driving.

4.2 Community Events

- Bikeability Cycle training was delivered to 1212 school pupils in the Borough, from Learn to Ride courses through to advanced Level 3 courses.
- A free bus service was provided on December weekends in the run up to Christmas for local residents to access the Lexicon shopping centre for the second year running.
- Summer of Fun events – council staff attended 4 of the ‘Summer of Fun’ events around the borough in 2024. We partnered with the public health team and Love to Ride, with the smoothie bike, colouring competitions and gave away prizes, maps, leaflets and walking and cycling promotional items. [Summer activities for families in Bracknell Forest | Bracknell Forest Council \(bracknell-forest.gov.uk\)](https://www.bracknell-forest.gov.uk/summer-activities-for-families-in-bracknell-forest)

- Led Walks and Rides – Sustrans officers funded by Public Health have continued to provide a popular series of led walks in the borough and we have been in discussion with them to broaden this offer to include led cycle rides.

Figure 4.1: Free Christmas Bus advert



- Led Walks and Rides – Sustrans officers funded by Public Health have continued to provide a popular series of led walks in the borough and we have been in discussion with them to broaden this offer to include led cycle rides.
- The Eco Rewards scheme (Public Health funded) is continuing to grow with nearly 3000 residents and 20 schools and colleges participating. In 2024 145,401 miles of sustainable journeys were logged on the system, and 193 tonnes of CO2e saved since the project began (compared to taking these trips by car). The scheme was expanded to cover Martins Heron and Winkfield in 2024 using funding from South Western Railways CCIF fund, and there are plans to further extend the scheme to the BID area. [Eco Rewards - Rewarding Green Travel Choices](#).
- Love to Ride platform and challenges – Love to Ride is an online community of people who cycle, for any purpose. People are encouraged to sign-up friends and work colleagues and take part in a number of challenges that run throughout the year. In the 2024 'Cycle September' event, 11 workplaces took part, 2,027 bike trips were recorded and 49% of participants were either new or occasional riders.

- 'Dr Bike' events at these events people bring their own bikes to a mechanic who gives them a basic M.O.T and performs minor fixes, as well as imparting advice and guidance for future maintenance. We delivered 2 staff events in 2024, whilst partners at Sustrans ran 2 community Dr Bike sessions.
- Held a Cycling Festival on Saturday 14th September 2024, in partnership with Trek, Avanti, Sustrans, and The Lexicon, to promote cycling in the Borough and showcase what we have to offer.

Figure 4.2: Bracknell Cycling Festival Flyer



- Walk to School week – we offered free resources to all schools in the borough to help them take part in the national walking promotion which takes place each May. 19 schools took up the offer this year.
- Clean Air Day on 20th June 2024, (Figure 2.3) all schools in Bracknell Forest have been asked to sign up to the “Clean Air Pledge”. By doing this they are agreeing to send out our literature to all the parents about air quality and anti-idling. Also actively joining in our competitions as well.

Figure 4.3: Clean Air Day Social Media Post



5 Current Borough Wide Monitoring

In the 2025 Annual Status Report Bracknell Forest confirmed it has 22 diffusion tube sites monitoring NO₂ levels in borough and that they have shown a decreasing trend since the 2020. No diffusion tube sites located within Bracknell Forest exceeded the Annual Mean Objective. No diffusion tube results were recorded above 60µg/m³, indicating no exceedances of the 1- hour NO₂ objective.

The highest recording of a diffusion tube in the whole Borough was 31.8 µg/m³ in 2024 within the Crowthorne AQMA, which meets the Annual Mean NO₂ Objective (40µg/m³) was not exceeded.

Bracknell Forest Council will be continuing to monitor the Air Quality across the borough (using diffusion tubes), it may move the locations and add new areas to the monitoring schedule as the local environment changes, such as new housing developments, changes to our road networks and the reduction of NO₂

across the borough. Bracknell is committed to continuing our work to reduce levels of pollution throughout the borough.

The Council will continue to monitor the Crowthorne AQMA along with many other areas of the borough especially the newly built estates, near roads which have recently been inhabited. The Council will be working toward reducing the concentration of all air pollutants to achieve the Air Quality Objectives as stated in the Environmental Act 2021.

6 Bracknell Forest Council Consultation

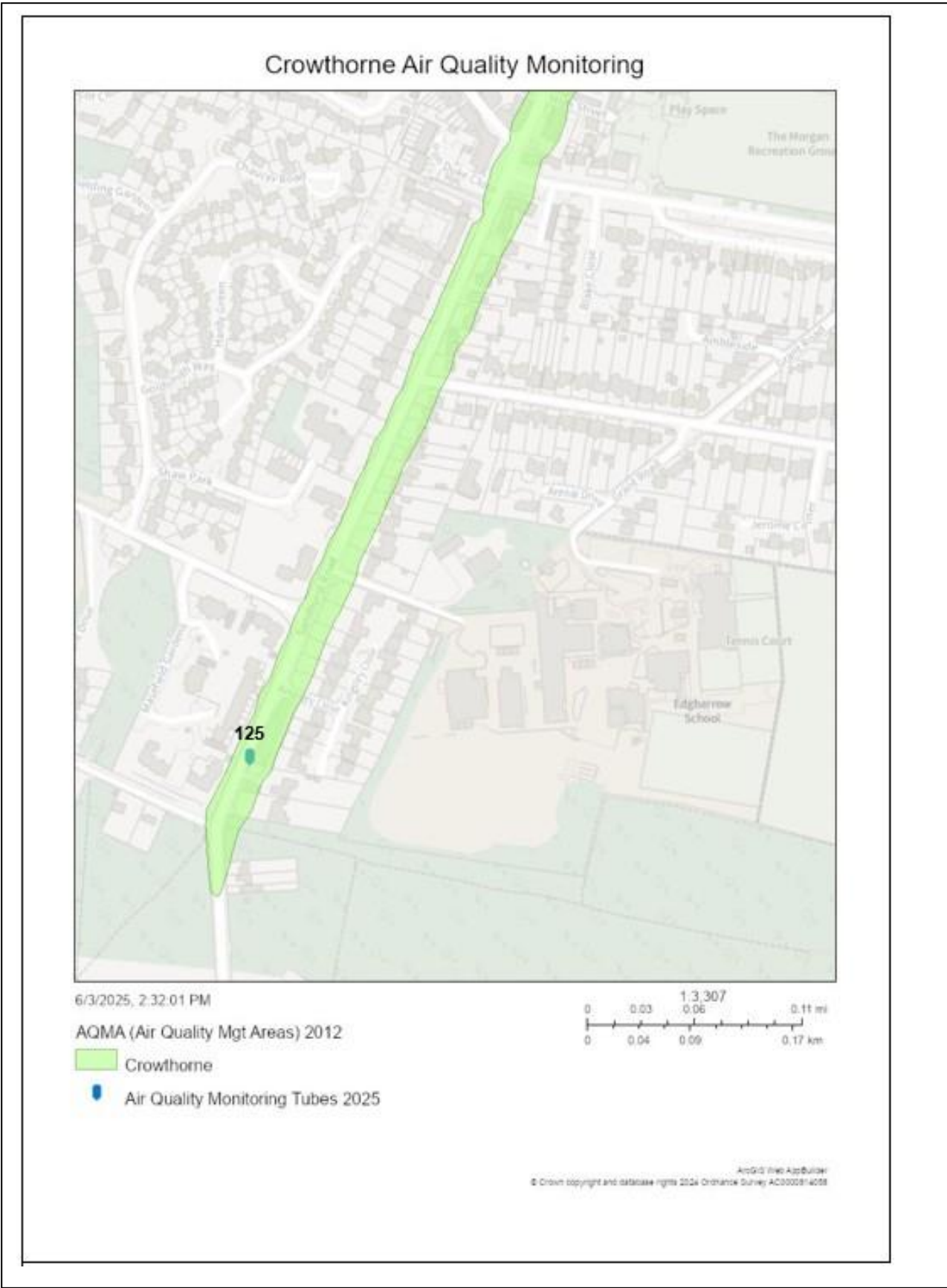
Bracknell Forest Council will consult with statutory consultees as well as interested parties of the intention to revoke the AQMA. It invited The Highways Agency, Environment Agency, neighbouring authorities, BFBC Planning, BFBC Highways and BFBC Climate Change for feedback by emailing EQteam@westberks.gov.uk.

7 References and Papers

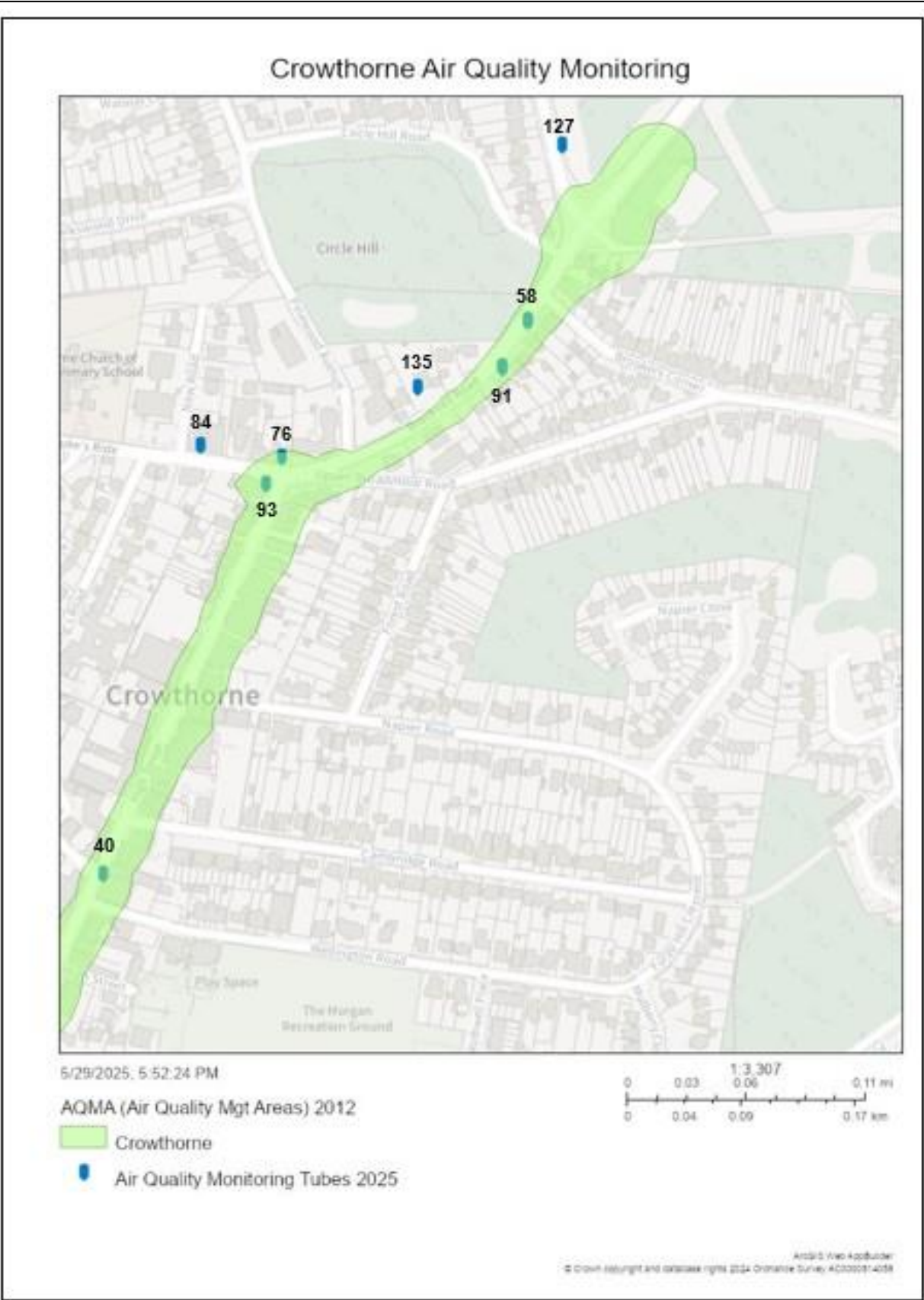
- **Bracknell Forest Council Annual Status Report (June 2025)**, by Charlie Fielder.
[Air Quality Monitoring - PPP \(publicprotectionpartnership.org.uk\)](https://publicprotectionpartnership.org.uk)
- **Air Quality Management Areas (AQMA)s (DEFRA October 2023)**
[AQMA Details - Defra, UK](#)
- **Local Air Quality Management Technical Guidance LAQM.TG (22) (August 2022)**. Published by Defra in partnership with the Scottish Government, Welsh Assembly Government and Department of the Environment Northern Ireland.
[LAQM-TG22-August-22-v1.0.pdf \(defra.gov.uk\)](#)



8.1 Map 2: The Crowthorne AQMA (South) diffusion tube monitoring location.



8.2 Map 3: The Crowthorne AQMA (North) diffusion tube monitoring locations



Appendix B:

QA/QC for the Diffusion Tubes and Continuous Monitor

QA/QC Diffusion Tubes

Bracknell Forest Council uses GRADKO as the supplier used for diffusion tubes and the method of preparation, e.g. 20% TEA in water. The monitoring that has been completed for the past 5 years+ is in adherence with the 2024 DEFRA Diffusion Tube Monitoring Calendar ([NO2 Diffusion Tube Monitoring Calendar | LAQM \(defra.gov.uk\)](https://www.defra.gov.uk/air-quality/monitoring/diffusion-tubes/2024-dtmc/)).

The Workplace Analysis Scheme for Proficiency (WASP) is an independent analytical performance testing scheme, operated by the Health and Safety Laboratory (HSL). WASP formed a key part of the former UK NO₂ Network's QA/QC and remains an important QA/QC exercise for laboratories supplying diffusion tubes to Local Authorities for use in the context of Local Air Quality Management. The laboratory participants analyse four spiked tubes and report the results to HSL. HSL assign a performance score to each laboratory's result, based on their deviation from the known mass of nitrite in the analyte. The Performance criteria are due to be changed, at present the criteria are based on the z-score method, and equates to the following:

GOOD: Results obtained by the participating laboratory are on average within 13% of the assigned value. This equates to a Rolling Performance Index (RPI) of 169 or less.

ACCEPTABLE: Results obtained by the participating laboratory are on average within 13-26% of the assigned value. This equates to an RPI of 169 - 676.

WARNING: Results obtained by the participating laboratory are on average within 26 – 39% of the assigned value. This equates to an RPI of 676 - 1521.

FAILURE: Results obtained by the participating laboratory differ by more than 39% of the assigned value. This equates to an RPI of greater than 1521.

However, from April 2009, the criteria has been based upon the Rolling Performance Index (RPI) statistic and will be tightened to the following:

GOOD: Results obtained by the participating laboratory are on average within 7.5% of the assigned value. This equates to an RPI of 56.25 or less.

ACCEPTABLE: Results obtained by the participating laboratory are on average within 15% of the assigned value. This equates to an RPI of 225 or less.

UNACCEPTABLE: Results obtained by the participating laboratory differ by more than 15% of the assigned value. This equates to an RPI of greater than 225.

Bracknell Forest Council use Gradko International for the supply and analysis of the nitrogen dioxide diffusion tubes for their non-automatic monitoring programme.

Diffusion Tube Bias Adjustment Factors

The diffusion tube data presented 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/NO₂ continuous analysers. Alternatively, the national database of diffusion tube co-location surveys provides bias factors for the relevant laboratory and preparation method.

A summary of bias adjustment factors used by Bracknell Forest Council over the past five years is presented in Table B. The site which was used was Downshire Way (Bracknell AQMA). Gradko International Ltd of St Martin's House 77 Wales Street Winchester Hampshire is the supplier and analyst of the nitrogen dioxide diffusion tubes. The tubes are analysed by U.V. spectrophotometry. The limit of detection is 20% TEA/Water.

Table B.1 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2024	National	4/25	0.84
2023	Local	-	0.83
2022	Local	-	0.87
2021	Local	-	0.83
2020	National	-	0.81