2025 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 2025

Information	Tunbridge Wells Borough Details
Local Authority Officer	Delainey Curry Dr. Stuart Maxwell
Department	Environmental Health
Address	Town Hall Mount Pleasant Road Tunbridge Wells TN1 1RS
Telephone	01892 526121
E-mail	delainey.curry@midkent.gov.uk
Report Reference Number	ASR 2025
Date	June 2025

Local Responsibilities and Commitment

This ASR was prepared by the Environmental Health Department of Tunbridge Wells Borough Council with the support and agreement of the following officers and departments:

Delainey Curry – Mid Kent Environmental Services

Dr. Stuart Maxwell – Mid Kent Environmental Services

This ASR has been approved by:

Lisa Anderson – Mid Kent Environmental Services Team Leader

Duncan Haynes – Mid Kent Environmental Services Department Manager

Timings preclude the approval of the ASR by Councillors prior to submission to DEFRA.

This ASR has been signed off by a Director of Public Health.

Dr Anjan Ghosh, Director of Public Health, KCC

If you have any comments on this ASR, please send them to Delainey Curry at:

Town Hall
Mount Pleasant Road
Tunbridge Wells
TN1 1RS

01892 526121

delainey.curry@midkent.gov.uk

1 Executive Summary: Air Quality in Our Area

Air Quality in Tunbridge Wells Borough

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.

Tunbridge Wells is a borough in Kent, located in the Southeast of England. As of 2023, Kent's population was approximately 1.61 million, with Tunbridge Wells accounting for around 7.3% (117,000 residents)[1]. This reflects a 1.0% increase from 2022

[1] Kent County Council. Population and Census Online Dataset – Accessed 30 May 2025.

(approximately 15,800 people), with projections indicating growth to 128,700 by 2030. The borough consists of the main town of Royal Tunbridge Wells and several smaller towns and villages such as Paddock Wood, Cranbrook, Hawkhurst and Goudhurst. The borough is largely rural in character and the area is served by several major A roads including the A21, A26, A264 and A267.

Royal Tunbridge Wells continues to experience traffic congestion, particularly on key approach roads to the town centre. In addition to vehicular emissions, air pollution levels are influenced by a combination of commercial, industrial, and domestic sources.

At the beginning of 2024, Tunbridge Wells Borough had two active Air Quality Management Areas (AQMAs) due to exceedances of the annual mean Air Quality Strategy objective for Nitrogen Dioxide (NO_2). The A26 AQMA, originally designated in 2005, extended in 2011, and amended in 2018 was formally revoked in April 2024 following sustained compliance with air quality objectives. Although the A26 AQMA had met the required standards for several years, the Council delayed revocation to ensure that the reductions observed during 2020 and 2021 were not solely attributable to the temporary impacts of the COVID-19 pandemic. Continued monitoring throughout 2022 and 2023 confirmed a consistent downward trend in NO_2 concentrations. Based on this evidence, officers submitted a report to the Tunbridge Wells Borough Council Cabinet recommending revocation, which was approved on 21 March 2024. The Revocation Order was validated on 19 April 2024 (Figure ES.1).

The Hawkhurst AQMA remains in effect to ensure that pollutant concentrations continue to meet long-term air quality objectives.

Figure ES.1 – St John's Road AQMA Revocation Order

TUNBRIDGE WELLS BOROUGH COUNCIL ORDER 2024

ENVIRONMENT ACT 1995 PART IV – SECTION 83(2)(b)

ORDER REVOKING AN AIR QUALITY MANAGEMENT AREA

Tunbridge Wells Borough Council, in exercise of the powers conferred on it by section 83(2)(b) of the Environment Act 1995 HEREBY makes the following order:-

1. The Tunbridge Wells Borough Air Quality Management Area Revocation Order 2024 (the order)
2. This order shall revoke The Tunbridge Wells Borough Air Quality Management Area Orders (2011) and (2018) as shown on the attached map.
3. The order shall come into force on 1st April 2024.

THE COMMON SEAL OF
TUNBRIDGE WELLS BOROUGH COUNCIL
WAS HEREUNTO AFFIXED
ON THE 19th DAY OF APRIL 2024
IN THE PRESENCE OF:

4208

Authorised Signatory

In 2024, NO_2 levels were monitored at 23 passive monitoring sites outside of the Hawkhurst AQMA. Of these

- 4 sites recorded an increase in annual mean NO_2 concentrations
- 9 sites remained broadly unchanged (within ±1µgm^{-3} of 2023 levels), and
- 9 sites showed a decrease.

Overall, the average annual mean NO_2 concentrations across these sites declined by approximately 2.9% compared to 2023.

The highest annual mean NO_2 concentration in 2024 was recorded at monitoring site TW82, located at the roadside beside Dorin Court on Pembury Road (A264), near the Bayhall Road junction. This site, first established in 2021, had previously exceeded the annual air quality objective each year until 2024, when it measured 34.8µgm^{-3}. Pembury Road is a key route into the town centre from the east and is known for significant congestion during peak hours. The route also serves several educational institutions, including Skinners' Kent Academy, Beechwood School and Oakley School.

Although elevated NO_2 levels are expected at roadside locations, the monitoring site TW82 is approximately 7.5m closer to the roadside than the relevant receptors and the road is very wide with few obstacles to affect dispersion of pollutants. NO_2 levels at the nearest relevant receptor are predicted to be 24.3µgm^{-3}.

Slight increases in NO_2 concentrations observed at the following sites, though none exceeded the annual objective:

- TW02 (The Hurst)
- TW73 (Summervale Road)
- TW84 (Camden Road)
- TW86 (Tunbridge Wells Free School)

Five sites required annualisation of data due to insufficient data capture, primarily from missing or stolen diffusion tubes. These sites included:

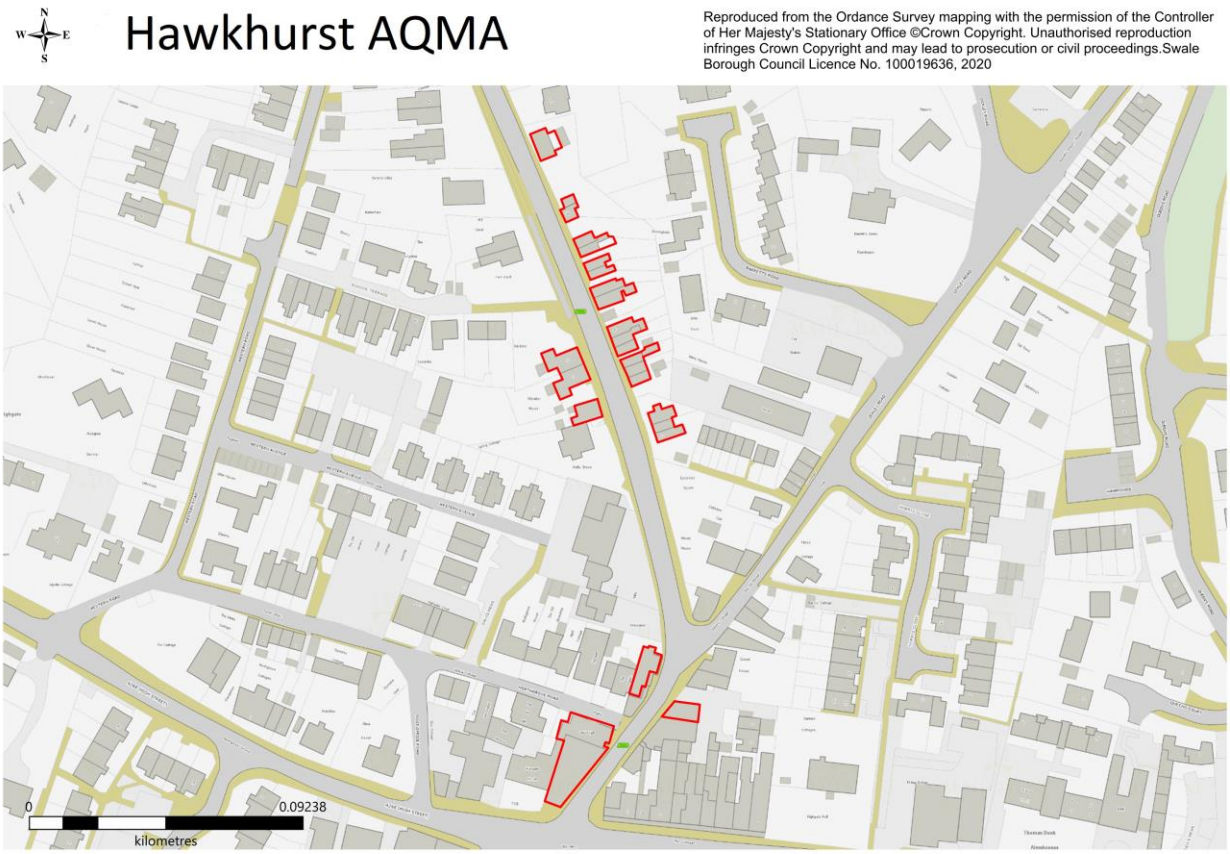
- TW20 (Ford Garages, A26 London Road)
- TW41 (The Pantiles Roundabout, A26 London Road)
- TW58 (The Pantiles Car Park, A26 London Road)
- TW71 (Seven Spring's Home, Pembury Road)
- TW77 (Robin Hood Pub, Birken Road).

Particular attention will be given to TW41 in 2025 as it is located on the A26 London Road, one of the main routes into and through Royal Tunbridge Wells from the south/north. This site has previously recorded NO2 concentrations within 1% of the annual objective, measuring 39.5µgm−3 in 2024. The site is also situated near The Pantiles, a popular town centre destination with mixed commercial and residential use.

To improve data reliability, additional monitoring sites are expected to be installed in the vicinity of TW41 in future years. Despite the data capture issues, annualised and distance corrected data for TW41 suggest a predicted annual mean NO2 concentration of 26.4µgm−3, accounting for the greater distance between the monitoring site and nearest residential receptor.

The Hawkhurst AQMA was declared in 2021 following a detailed assessment carried out in 2020 by Air Quality Consultants Ltd, based on air quality monitoring data acquired in 2019. This AQMA is relatively short in distance and is predicted to include only specific properties as indicated in Figure ES.2.

Figure ES.2 – Hawkhurst AQMA



Initially eight monitoring sites were established in this AQMA, however several of these were discontinued in early 2023 due to consistently low readings. As of 2024, three active monitoring sites remain:

- TW69 (The Old Infant House, Cranbrook Road)
- TW70 (8-9 Cranbrook Road)
- TW63 (Craft Centre, Cranbrook Road).

No exceedances of the annual mean NO_2 objective were recorded at any of these sites in 2024. Most sites show a continued downward trend in NO_2 concentrations since 2023.

TW63 is a triplicate monitoring site located on the ground floor façade of the Craft Centre building. This location is not in residential use; the nearest relevant receptors are situated several metres downhill from this location at the first-floor level and on a street corner, likely reducing their exposure to emissions from queuing traffic due to increased dispersion. Annual mean NO_2 concentrations at TW63 decreased from 33.3 μgm^{-3} to 30.9 μgm^{-3} in 2024, following a significant drop of 9.6 μgm^{-3} between 2022 and 2023.

Given that the concentrations at the monitoring site are now below the annual objective, it is highly probable that levels at the nearest residential receptor are also compliant. This is supported by the 2020 detailed assessment, which reported a 2019 concentration of 52.7µgm^{-3} at TW63, but predicted concentrations of 35.8µgm^{-3} at the nearest residential receptor.

In contrast, TW69 is located across the street from TW63, with the nearest relevant receptor at basement level and closer to the roadside. Due to these factors, NO_2 levels are expected to be slightly higher than measured. In 2024, TW69 recorded an annual mean of 26.3µgm^{-3} which is under the objective. However, local topography and building configuration influence the pollutant dispersion, resulting in variable concentrations across the area. As a result, further monitoring is required to accurately assess potential exceedances at relevant receptor locations, as direct inference is not always reliable.

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.

Hawkhurst Planning Position Statement

Tunbridge Wells Borough Council has adopted a planning position statement to ensure that new developments do not lead to significant increases in air pollution or exceed annual air quality objectives within the Hawkhurst AQMA. Proposals within the parishes of Cranbrook & Sissinghurst, Hawkhurst and Sandhurst are subject to enhanced scrutiny to assess their potential impact on air quality along the AQMA. We have adopted the impact descriptors outlined in the in the *Institute of Air Quality Management and Environmental Protection UK's* guidance: *Land-Use Planning and Development Control: Planning for Air Quality (January 2017).*

Information Campaign for Hawkhurst AQMA Residents

Tunbridge Wells Borough Council plans to install street signage to inform motorists when they are entering the Hawkhurst AQMA. Proposed sign locations are currently under review and will be finalised following the completion of the planned crossroads improvement works, as detailed in the following section. The proposed signage design is illustrated in Figure ES.3.

Figure ES.3 – Potential Hawkhurst AQMA Signage

Hawkhurst Crossroads Highways Improvements

Kent County Council has committed to delivering pedestrian and cycle infrastructure enhancements at the Hawkhurst crossroads (junction of High Street, Cranbrook Road, Rye Road, and Highgate Hill) under Section 278 of the Highways Act 1980. These works are scheduled for completion by mid-2025.

Health Professionals Resource (DEFRA Funded)

The Mid-Kent Environmental Services have been received funding from the Department of Environment, Food and Rural Affairs (DEFRA) to develop a digital training platform and resource for healthcare practitioners across Kent and Medway. The initiative aims to support clinicians in advising patients with cardiovascular and respiratory conditions on reducing exposure to air pollution, integrating this guidance into routine care. The platform also facilitates collaboration among general practitioners and other healthcare professionals on air quality and health-related issues. Seven online modules have been developed, including one focused on the intersection of air quality and maternity.

The resource was rolled out in three phases:

- Pilot phase: Broad feedback was sought from health care professionals including midwives and health visitors to ensure content aligned with user needs.
- Soft launch: In February 2024, the platform was released to a limited audience for further feedback on usability and functionality.
- Full Launch: In November 2024, the resource became publicly available to all registered healthcare professionals.

To date, 37 professionals have registered – 23 from Kent and Medway and 14 from other regions in the UK. While most registrants specialise in sustainability and air quality, the platform has also attracted general practitioners and health visitors.

Clean Air for Schools (CAFS) Programme and Pollution Patrol Resource

The Clean Air for Schools scheme was developed by the Mid-Kent Environmental Services in 2018, and DEFRA funding was subsequently awarded to this department in partnership with Canterbury City Council in 2021 to develop a behaviour and awareness campaign targeting primary school children and their parents. This initiative led to the creation of the Pollution Patrol digital education resource, developed by TMC Strategic Communications.

Despite multiple engagement efforts, uptake of the resource has been limited. To increase visibility, a digital marketing campaign including a Google Ads (Pay-Per-Click) and LinkedIn advertising was launched on 5 January 2024 and remained active throughout Q1. However, the campaign had minimal impact on user registrations.

In early 2024, options were explored to secure a commercial partner to support the continued promotion and development of the resource beyond the initial DEFRA funding. A tender specification was issued via the Kent Business Portal between 2 January and 16 February 2024. Although several organisations expressed interest, no formal bids were received.

To date, Pollution Patrol has registered 49 teachers/schools and 27 parents. Based on this data, it is estimated that approximately 2,010 pupils across Kent and Medway have engaged with the platform. However, overall interest from schools has been significantly lower than anticipated.

An independent evaluation of this programme is currently being conducted by the University of Kent, with the final report expected in 2025.

Targeted Anti-Idling Signage

Two anti-idling sign designs have been developed for use across Tunbridge Wells. One design is a generic design for the Mid-Kent Shared Services partnership (serving Tunbridge Wells Borough Council, Maidstone Borough Council and Swale Borough Council) intended for general idling hotspots. The second design, based on artwork from the Pollution Patrol project specifically targets areas near schools. These designs are presented in Figure ES.4 and Figure ES.5.

To date, approximately 25 signs have been installed at priority school locations. An online submission form is in the process of being developed for the Tunbridge Wells Borough Council official website to enable residents to report idling hotspots and streamline requests for additional signage.

Figure ES.4 – Generic Anti-Idling Signage

Figure ES.5 – Pollution Patrol Anti-Idling Signage

Conclusions and Priorities

In 2024, slight increases in NO_2 concentrations were observed at four of the twenty-seven passive monitoring sites across Tunbridge Wells Borough. However, no exceedances of the annual mean air quality objective were recorded. The remaining sites showed either stable or declining trends, indicating a general improvement in air quality.

The highest NO_2 concentrations were recorded at sites TW82 and TW41. TW82, which also had the highest reading in 2023, is located near a busy road but is not representative of residential exposure due to the setback of nearby properties. TW41, adjacent to a busy roundabout and pedestrian crossing, achieved only 39.6% data capture and required annualisation. Residential receptors near TW41 are set back from the road and primarily

located on upper floors, reducing direct exposure. To improve data reliability, the Council is considering establishing additional monitoring sites near TW41.

Air quality in the Hawkhurst area continues demonstrate improvements. Monitoring site TW63 HH Smuggler's Rest, Cranbrook Road and others within the AQMA have shown compliance with the annual objectives for two consecutive years. However, due to the area's varied topography and receptor locations updated dispersion modelling is planned to better assess exposure levels based on these recent measurements.

At the St John's Road Automatic Monitoring Station, annual NO_2 concentrations decreased from 23.0µgm^{-3} in 2023 to 20.3µgm^{-3} in 2024, remaining well below the objective of 40µgm^{-3}. Similar improvements were observed in PM_{10} which fell from 20µgm^{-3} in 2023 to 17.6µgm^{-3}. $PM_{2.5}$ levels increased slightly from 7.0 µgm^{-3} to 7.8 µgm^{-3} but remain consistent with previous years and compliant with future targets of 12 µgm^{-3} by 2028 and 10 µgm^{-3} by 2040. No exceedances of 24-hour mean objectives were recorded for any pollutants in 2024.

Priorities for 2025 will remain aligned with those of 2024. The primary focus will be continued delivery of the Hawkhurst Air Quality Action Plan 2023. A detailed assessment of air quality levels in the Hawkhurst AQMA and updated dispersion modelling will be completed in 2025 or 2026 to evaluate compliance at the relevant exposure points. DEFRA-funded projects will also progress, with a decision on the future of the Pollution Patrol initiative expected to be made in 2025. Sponsorship opportunities will continue be sought to support its ongoing use and promotion. Additionally, the Clean Air Academy health resource will continue to be delivered in 2025 in partnership with Kent County Council and the Director of Public Health.

How to get Involved

The Council operates several advisory boards that meet in public monthly to provide formal recommendations to decision-making committees. The Communities Housing and Environment Cabinet Advisory Board advises on policy within their remit, including air quality. Air quality officers will attend these meetings as needed, either when air quality is on the agenda or at the request of councillors or council leadership. Members of the public are encouraged to participate. Anyone wishing to comment on an agenda item must register with Democratic Services in advance. Registration opens when the agenda is published and closes at 4pm on the last working day before the meeting. A full calendar

of upcoming meetings is available at the Council's website and are also displayed at the Town Hall during business hours.

The Environmental Protection team is working in partnership with the Parking Enforcement Department at Tunbridge Wells Borough Council to identify engine idling hotspots. This collaboration helps direct enforcement patrols to areas where they can be most effective. Reports of prolonged engine idling can be submitted either online at our website or by calling the Council offices.

Tunbridge Wells Borough Council is also an active member of the Kent and Medway Air Quality Partnership. Residents can sign up for air pollution alerts through the KentAir website which also offers educational resources on air quality, including monitored pollutants, health impacts, and relevant UK legislation, policies and standards.

The main source of air pollution in Tunbridge Wells Borough originates from transport. The easiest way for members of the public to get involved with helping improving air quality would be by making changes to the methods in which they travel. The following are suggested alternatives to private travel which would likely improve air quality:

- Use public transport where available – This reduced the number of private vehicles on the road thus helping to reduce congestion and air pollution levels
- Walk or cycle if your journey allows – Choosing to walk or cycle your journey reduces the number of vehicles on the road and regular exercise helps keep people fit and healthy;
- Car/lift sharing – Where a few individuals are making similar journeys, such as travelling to work or to school, car sharing reduces the number of vehicles on the road and therefore the number of emissions being released This is being promoted via travel plans through the workplace and within schools; and
- Alternative fuel/more efficient vehicles – Choosing a vehicle that meets the specific needs of the owner, fully electric, hybrid fuel and more fuel-efficient cars are available, and all have diverse levels of benefits in reducing the number of emissions being released. Changes have been made in 2022 to Approved Document S of the Building Regulations 2010 and now at least one EV charging point must be installed in almost all new and retrofit properties.
- Turn off the engine if your car is not moving – An idling engine burns fuel less efficiently than when the vehicle is moving.

The burning of wood, coal and other solid fuels in the domestic sector may also impact local air quality as point sources in dwellings. Residents may wish to consider the following measures to reduce these emissions:

- Consider using an Ecodesign compliant or Defra exempt stove
- Only use the right fuel (for wood burning stoves, dry wood containing less than 20% moisture content)
- Store wood in a dry area
- Do not burn treated wood, such as painted, stained or chemically treated wood
- Ensure stoves are installed by a suitably qualified and experienced engineer
- Ensure stoves and chimneys are maintained regularly

Table of Contents

Figures

Tables

2 Local Air Quality Management

This report provides an overview of air quality in Tunbridge Wells Borough during 2024. 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 Tunbridge Wells Borough 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.

3 Actions to Improve Air Quality

3.1 Air Quality Management Areas

Air Quality Management Areas (AQMAs) are declared when there is an exceedance or likely exceedance of an air quality objective. After declaration, the authority should prepare an Air Quality Action Plan (AQAP) within 18 months. The AQAP should specify how air quality targets will be achieved and maintained and provide dates by which measures will be carried out.

A summary of AQMAs declared by Tunbridge Wells Borough Council can be found in Table 3.1. The table presents a description of the one AQMA that is currently designated within Tunbridge Wells Borough. Appendix D: Map(s) of Monitoring Locations and AQMAs provides maps of AQMA and also the air quality monitoring locations in relation to the AQMA. The air quality objectives pertinent to the current AQMA designation(s) are as follows:

- NO_2 annual mean;

Table 3.1 – Declared Air Quality Management Areas

AQMA Name	Date of Declaration	Pollutants and Air Quality Objectives	One Line Description	Is air quality in the AQMA influenced by roads controlled by Highways England?	Level of Exceedance: Declaration	Level of Exceedance: Current Year	Number of Years Compliant with Air Quality Objective	Name and Date of AQAP Publication	Web Link to AQAP
Hawkhurst AQMA	2021	NO_2 Annual Mean	Residential properties in the southern part of Cranbrook Road in the center of Hawkhurst	NO	56.7	34.8	2	Hawkhurst AQAP September 2023	Visit the AQAP for Hawkhurst AQMA

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

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

3.2 Progress and Impact of Measures to address Air Quality in Tunbridge Wells Borough

Defra's appraisal of last year's ASR concluded

1. The Council should seek approval from the Director of Public Health for future ASRs. Although this is not a requirement it is recommended as collaboration and consultation with those who have responsibility for Public Health is expected to increase support for measures to improve air quality, with co-benefits for all.

TWBC Response: Timing requirements of DEFRA preclude our approval of the ASR prior to submission. Automatic monitoring data for the 2024 monitoring year was not fully verified by our data collectors until late-May 2025. The Director of Public Health stated via email in 2024 when discussing the issue before submission of last year's ASR "I do think it is a positive step that the DPH needs to sign this off as it is a way of ensuring that this is looked at from a PH point of view – but it is one thing to be doing this as a unitary local authority once, and quite another doing it across 12 districts. The same predicament must be experienced by other large county councils with several districts, like Hampshire and Surrey. So, while we recognise and appreciate the importance, a different process needs to be created that allows time and capacity for large counties.". The ASR is signed off by the DPH as soon as it is possible to do so, but this is not always prior to submission to DEFRA.

2. QA/QC procedures are appropriate, with sufficient evidence provided.

TWBC Response: Noted.

3. Tunbridge Wells Borough Council have detailed its measures in place to reduce $PM_{2.5}$ in the area. The Council have also referred to the Public Health Outcome Framework relating to air quality and have provided the D01 indicator, with a comparison to the national average. This is welcomed and should be continued with regular reviews of the measures to ensure they are still relevant.

TWBC Response: Regular reviews of measures which may impact $PM_{2.5}$ will be monitored in the future, particularly as annual objectives for this pollutant become more stringent.

4. The Council have stated that they will begin the process of the revocation of the A26 AQMA, due to more than 3 years of compliance with the relevant standard. This is commended, as keeping AQMAs in place longer than required risks diluting their meaning and impacting public trust in LAQM.

TWBC Response: The A26 AQMA was officially revoked in April of 2024.

5. The Council's presentation of trend graphs is very useful as they clearly identify trends within certain areas.

TWBC Response: Thank you for the feedback – We will keep this style going forward.

6. The formatting of the report could generally be improved, for example ensuring all graphs are not cut off and pages are formatted with the correct orientation.

TWBC Response: Noted.

Tunbridge Wells Borough has taken forward a number of direct measures during the current reporting year of 2024 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 3.2. Nine measures are included within Table 3.2, with the type of measure and the progress Tunbridge Wells Borough have made during the reporting year of 2024 presented. Where there have been, or continue to be, barriers restricting the implementation of the measure, these are also presented within Table 3.2.

More detail on these measures can be found in their respective Action Plans. Key completed measures are:

- Emerging Borough Local Plan – The Council is preparing a new Borough Local Plan covering the period 2020-2038. The plan is currently at the examination stage and is expected to be adopted by mid-2025. At this time no further consultations are planned between the Planning Inspectorate, the Planning Policy team, and the Environmental Health department.

Tunbridge Wells Borough Council expects the following measures to be completed over the course of the next reporting year:

- Hawkhurst Crossroads Improvements – Roadworks at the junction of High Street, Cranbrook Road, Rye Road and Highgate hill (Permit GE27836890476) are scheduled for completion by July 2025.

- AQMA Signage Installation – Following the completion of the crossroads improvements, signage will be installed to inform motorists they are entering the Hawkhurst AQMA.
- Improve air quality mitigation of businesses in Gill's Green – A planning application submitted in 2025 for commercial/industrial development near the Hawkhurst AQMA will be reviewed by officers to ensure appropriate air quality mitigation is in place.

Tunbridge Well Borough Council's priorities for the coming year are:

- To secure a commercial sponsor for the Pollution Patrol resource to secure the long-term availability, sustainability and further promote the resource post-DEFRA funding.
- To continue to develop the Clean Air Academy Health Care Practitioners resource, which forms the basis of our latest DEFRA project.

Tunbridge Wells Borough Council worked to implement these measures in partnership with the following stakeholders during 2024:

- Kent County Council
- TMC Creative Limited
- Matt's Monitor's Limited
- Ricardo PLC
- Air Quality Consultants Limited
- Hawkhurst Parish Council

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

- Engagement with stakeholders – Adoption of the action plan items and the timeline for completion relies on the engagement and active participation in the measures by all stakeholders.
- Competition with other green initiatives – There are a large number of green initiatives that exist in the UK to contend with the actions in our action plan. Stakeholders have agency to choose which initiatives or resources to take on.

Progress on the following measures has been slower than expected due to:

- Collaborating with schools to promote active travel and travel plans – Engagement with schools and other academic institutions has been considerably less than we

had originally anticipated. While we have received all travel plans for secondary school pupils of the Hawkhurst area, few have been updated within the last five years.

Tunbridge Wells Borough Council anticipates that the measures stated above and in Table 3.2 will achieve compliance in the Hawkhurst AQMA.

Table 3.2 – 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
1	New improved traffic signals at crossroad	Traffic Management	Strategic highway improvements, re-prioritising road space away from cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	2022	2028	Mid Kent Environmental Health, Kent County Council	Private Sector s106 Agreements	Funded	£50K-£100K	Planning	MOVA systems reduce delays by 10-20%	Upgraded MOVA signals installed	Upgrades to the lights currently in progress and works are progressing on schedule	Funding available from S106 to replace current VA signals. Query if this will be fully effective if current parking continues to prevent flow of traffic.
2	Working with schools to promote active travel and travel plans	Public Information	Via other mechanisms	2022	2030	Mid Kent Environmental Health, Kent County Council	Existing TWBC budgets and DEFRA pollution patrol project	Funded	<£10k	Implementation	Reduce traffic idling around schools during pick up/drop off times	All Hawkhurst Primary Schools signed up to Pollution Patrol. Travel Plans for schools of Hawkhurst Students updated annually	Secondary schools identified. Pupil numbers acquired. No updates to travel plans received to date.	Limited success in engaging with schools.
3	Awareness Campaign including signage	Public Information	Other	2021	2025	Mid Kent Environmental Health, Tunbridge Wells Borough Council Communications Department, Kent County Council	Existing TWBC budgets	Funded	<£10k	Implementation	Reduced traffic idling within AQMAs	Achieve conditions favourable for AQMA revocation	Target lampposts identified. Street furniture application to be submitted upon completion of crossroads improvements.	Subject to KCC allowances of street furniture.
4	Increased EV points	Promoting Low Emission Transport	Procuring alternative refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2018	2028	Kent County Council	KCC Budgets	Funded	£10K-£50K	Planning	Reduced emissions from petrol and diesel vehicles	Increase in number of EV charging points	KCC have installed chargers at 25 locations to date and are in the process of adding another 8 across the county. KCC are also in the process of leading a project with Connected Kerb to place over 600 off-street public charging points around Kent.	KCC programme of EVCP delivery focusses primarily on off-street provision within Local Authority car parks.
5	Working with planning development to improve mitigation of businesses in Gills Green	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2023	2038	Mid Kent Environmental Health, Tunbridge Wells Borough Council Planning Department	Existing TWBC Departmental Budgets	Funded	<£10k	Planning	Reduction in emissions from commuter and freight traffic to and from Gill's Green geographical area	Active Travel infrastructure enacted for any new development	Application received for development around Gill's Green. Revised Air Quality Assessment required.	This action specifically relates to a large development at the Gills Green Business Park
6	Ensure all developments are in accordance with current AQ policies in emerging local plan	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2023	2038	Mid Kent Environmental Health, Tunbridge Wells Borough Council Planning Policy	Existing TWBC Departmental Budgets	Funded	<£10k	Implementation	Minimise AQ impacts of new developments	Development of Air Quality Guidance specific to Hawkhurst Area	Hawkhurst Planning Position Statement developed. Air Quality section of the proposed Local Plan modified to describe requirement for air quality assessments with development.	Adoption of the Local Plan is expected to be completed in 2025
7	Have awareness of potential impact of cross boundary development	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2023	2040	Mid Kent Environmental Health, Tunbridge Wells Borough Council Planning Department	Existing TWBC Departmental Budgets	Funded	<£10k	Implementation	Minimise AQ impacts of new developments	Consultation with cross-boundary Local Authority Environmental Health departments regarding major developments	Ongoing	Influence is limited to consultee status. Good working relationship with neighbouring Local Authorities.

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
8	Explore options to limit and mitigate the effects of HGVs on the crossroads in Hawkhurst	Traffic Management	Other	2023	2024	Mid Kent Environmental Health, Kent County Council	KCC Budgets	Funded	<£10k	Planning	Minimise AQ impacts of HGV traffic	Reduction of HGV movement along Hawkhurst AQMA	Identifying options	Measure reworded to reflect difficulty and time needed to identify suitable alternatives. KCC note that crossroads are located at junction of two A roads suitable for most traffic (A229 and A268). These roads have been deemed not suitable for HGV restrictions or rerouting due to lack of suitable diversion route and impact on access and deliveries for business and agriculture
9	Prioritise Hawkhurst in the rollout of new DEFRA funded Clean Air Academy	Public Information	Via other mechanisms	2023	2029	Mid Kent Environmental Health, Kent County Council	Existing TWBC budgets, DEFRA funding	Funded	<10k	Planning	N/A	Hawkhurst GP Survey Sites pilot resource	Resource launched in November 2024	Promotion via KCC would be ideal due to intersection of the Director of Public Health and GP surgeries.

3.3 $PM_{2.5}$ – Local Authority Approach to Reducing Emissions and/or Concentrations

As detailed in Policy Guidance LAQM.PG22 (Chapter 8) and the Air Quality Strategy[2], 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.

Public Outcomes Framework data from 2023 (indicator D01) states that the fraction of deaths attributable to $PM_{2.5}$ in Tunbridge Wells is 4.9%[3]. This is lower than both the national average of 5.2% and the Southeast average of 5.1%.

Tunbridge Wells Borough Council is taking the following measures to address $PM_{2.5}$:

Automatic monitoring of $PM_{2.5}$ began in Tunbridge Wells Borough in 2022 with equipment installed and operational by May of that year. In 2022, data capture reached 56% and an annual mean $PM_{2.5}$ concentration was measured at 8µgm^{-3}. This improved to 99.6% data capture and a mean of 7µgm^{-3} in 2023. In 2024 data capture was at 84.5% with a slightly higher mean of 7.8µgm^{-3}. Despite this slight increase, levels remain within both current and proposed future $PM_{2.5}$ objectives.

There are currently no Smoke Control Zones in Tunbridge Wells Borough Council's geographical area. While this measure may be considered if future monitoring indicates exceedances of 2040 objectives, there are no current plans to implement such zones.

The Environmental Protection Department, a statutory consultee for developments affecting air quality, strongly discourages the installation of domestic combustion appliances in new developments. Planning applications that include such installations receive the following standard informative.

"Wood burners and multiple fuel stoves are strongly discouraged by this department since the pollutants from them can be a nuisance to the neighbouring occupants and enforcement over the use of the correct fuels in the domestic sector is difficult. In addition

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

[3] Office for Health Improvement & Disparities. Public Health Profiles. Accessed June 2025

to the installation complying with the Clean Air Act requirements, the cleanest installation and fuel option should be considered (i.e. pellet preferable to chips, preferable to wood).”

Action 2 of our AQAP involves the Clean Air for Schools programme and Pollution Patrol schools’ resource, which contain elements on domestic burning, industrial sources and transport sources of particulate matter. Similar messages are included in the Clean Air Academy health practitioners’ resource (Action 9 of AQAP).

It is recognised that measures employed to reduce NO_2 and PM_{10} will also have a beneficial effect on $PM_{2.5}$, therefore several of the measures included in out AQAP will tackle $PM_{2.5}$.

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

This section sets out the monitoring undertaken within 2024 by Tunbridge Wells Borough Council and how it compares with the relevant air quality objectives. In addition, monitoring results are presented for a five-year period between 2020 and 2024 to allow monitoring trends to be identified and discussed.

4.1 Summary of Monitoring Undertaken

4.1.1 Automatic Monitoring Sites

Tunbridge Wells Borough Council undertook automatic (continuous) monitoring at one site during 2024. 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 KentAir page presents automatic monitoring results for Tunbridge Wells Borough Council, with automatic monitoring results also available through the UK-Air website.

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

4.1.2 Non-Automatic Monitoring Sites

Tunbridge Wells Borough Council undertook non-automatic (i.e. passive) monitoring of NO_2 at 23 sites during 2024. 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.

4.2 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.

4.2.1 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 2024 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.

No exceedances were identified in any passive monitoring site in the 2024 monitoring year. The highest reading site in the borough was TW82 on Bayhall Road, which recorded an annual mean of 34.8µgm^{-3} at the monitoring site. This monitoring site is set approximately 7.5m closer to the road than the nearest residential receptor. TW41 remains the second highest reading passive site in the borough, although data capture for this site has been affected by the removal of diffusion tubes by passers-by. A new site will be established in 2025 near to TW41 to acquire greater data capture for the area.

There were no exceedances of the hourly mean at the automatic monitoring station in any year from 2020-2024 and no diffusion tube has recorded an annual average mean NO_2 level in excess of 60µgm^{-3}, therefore exceedances in the hourly mean objective for NO_2 are not thought to be likely in the Tunbridge Wells Borough.

4.2.2 Particulate Matter (PM_{10})

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

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

PM_{10} concentrations have remained fairly consistent throughout the last five years. From 2020-2022 the annual concentrations rose at the automatic monitoring site from 18µgm^{-3} to 22µgm^{-3}, however this has decreased to 20µgm^{-3} in the 2023 monitoring year and further to 17.6µgm^{-3} in the 2024 monitoring year. These levels are well below the annual air quality objectives for PM_{10}, and no AQMA is planned on the basis of these levels. In fact, the St John's Road AQMA which contains the PM_{10} automatic monitoring site has recently been revoked due to sustained compliance with annual objectives. Tunbridge Wells Borough Council plans to continue monitoring the PM_{10} concentrations at this location to ensure levels remain below annual objectives.

2024 is the second consecutive year in which there were no exceedances of 24-hour Mean PM_{10} objective levels at the automatic monitoring site.

4.2.3 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 annual mean PM_{10} concentrations measured at the automatic monitoring station has remained relatively consistent since the installation of our monitoring device in 2022, where levels were measuring at 8µgm^{-3}. These concentrations dropped to 7µgm^{-3} in 2023, but this year have risen slightly to 7.8µgm^{-3}. The monitored levels are comfortable below the current and future objective levels. No exceedances of 24-hour objective concentration levels were determined in 2024.

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? (1)	Monitoring Technique	Distance to Relevant Exposure (m) (2)	Distance to kerb of nearest road (m) (1)	Inlet Height (m)
CM1	A26 St John's Road	Roadside	558260	141599	NO_2; PM_{10}; $PM_{2.5}$	NO	N/A	Chemiluminescent; TEOM; BAM	18	4	3

Notes:

(1) N/A if not applicable

(2) 0m if the monitoring site is at a location of exposure (e.g. installed on the façade of a residential property).

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)
TW02	11 The Hurst, T Wells	Urban Background	560022	141249	NO_2	No	6.0	1.6	No	2.4
TW20	Mount Ephraim, T. Wells	Roadside	558303	139903	NO_2	No	2.8	2.0	No	2.3
TW23	Neville Gate T. Wells	Urban Background	558748	138219	NO_2	No	16.0	0.7	No	2.4
TW25	Flying Dutchman, T Wells	Roadside	558142	142004	NO_2	No	1.8	2.6	No	2.9

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)
TW34.1, TW34.2, TW34.3	The Cutout St Johns Roat T Wells AQ Station	Roadside	558260	141605	NO_2	No	14.0	4.0	Yes	3.5
TW41	by 38 The Pantiles, London Rd, T. Wells	Roadside	558070	138756	NO_2	No	4.8	1.8	No	3.0
TW53	Warrington Road, P Wood	Roadside	566874	145076	NO_2	No	9.0	1.8	No	3.0
TW55	Badsell Road, P Wood	Roadside	566803	144107	NO_2	No	11.0	1.8	No	2.3
TW58	Union House, T Wells	Roadside	557948	138620	NO_2	No	7.4	1.3	No	2.0
TW60	12 Gorse Road, P Wood	Urban Background	560234	140146	NO_2	No	10.0	30.0	No	2.5
TW63.1 HH, TW63.2 HH, TW63.3 HH	Cranbrook Road Smugglers Rest triplicate, Hawkhurst	Roadside	576056	130592	NO_2	Yes - Hawkhurst AQMA	0.0	1.0	No	2.5
TW69 HH	Near substation, Cranbrook Road, Hawkhurst	Roadside	576068	130619	NO_2	Yes - Hawkhurst AQMA	3.0	2.5	No	2.4
TW70 HH	Outside 8-9 Cranbrook Road, Hawkhurst	Roadside	576042	130765	NO_2	Yes - Hawkhurst AQMA	0.2	1.2	No	2.2
TW71	Seven Springs Home - T Wells	Roadside	560892	140403	NO_2	No	7.0	1.5	No	2.4

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)
TW72	Southborough Civic Centre - T Wells	Roadside	558149	142085	NO_2	No	2.0	3.0	No	1.6
TW73	Summervale Road - T Wells	Roadside	557358	138134	NO_2	No	15.0	4.5	No	1.8
TW74	Papa Johns Southborough, T Wells	Roadside	558138	142223	NO_2	No	0.0	5.0	No	2.6
TW75	6 Bayhall Road, T Wells	Roadside	559209	139319	NO_2	No	3.0	3.0	No	2.0
TW77	Robin Hood Pub, T Wells	Roadside	559816	140823	NO_2	No	24.0	3.0	No	1.8
TW82	Dorin Court Bayhall Road, T Wells	Roadside	559162	139393	NO_2	No	7.5	1.0	No	2.8
TW83	Carrs Corner Roundabout, T Wells	Roadside	558782	139489	NO_2	No	0.0	2.6	No	1.8
TW84	50 Camden Road, T Wells	Roadside	558794	139786	NO_2	No	0.6	1.0	No	1.2
TW86	TW Free School Mount Ephraim, T Wells	Roadside	558280	139872	NO_2	No	17.2	1.3	No	2.6

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 2024 (%) (2)	2020	2021	2022	2023	2024
CM1	558260	141599	Roadside	99.5	99.5	31	26	25	23	20.3

☒ **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 2024.**

Notes:

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

Exceedances of the NO_2 annual mean objective of 40µg/m^3 are shown in **bold**.

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

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

(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

Table A.4 – Annual Mean NO_2 Monitoring Results: Non-Automatic Monitoring (µg/m^3)

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
TW02	560022	141249	Urban Background	100.0	100.0	9.3	9.3	9.5	7.5	10.0
TW20	558303	139903	Roadside	49.1	49.1	24.7	27.9	29.5	21.5	22.0
TW23	558748	138219	Urban Background	81.1	81.1	7.6	8.1	8.7	6.1	7.1
TW25	558142	142004	Roadside	83.0	83.0	22.2	22.6	26.3	18.1	17.1
TW34.1, TW34.2, TW34.3	558260	141605	Roadside	84.9	92.5	25.1	26.0	23.9	21.8	21.5
TW41	558070	138756	Roadside	39.6	39.6	34.5	35.9	38.3	39.5	31.5
TW53	566874	145076	Roadside	75.5	75.0	10.5	11.8	11.4	10.7	9.2
TW55	566803	144107	Roadside	83.0	83.0	13.7	16.7	19.6	14.6	14.4
TW58	557948	138620	Roadside	66.0	66.0	31.3	27.5	29.5	26.1	22.2
TW60	560234	140146	Urban Background	75.5	75.0	11.3	12.7	11.9	11.2	9.8
TW63.1 HH, TW63.2 HH,	576056	130592	Roadside	90.6	81.1	35.0	39.6	**43.5**	34.5	30.9

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 2024 (%) (2)	2020	2021	2022	2023	2024
TW63.3 HH										
TW69 HH	576068	130619	Roadside	90.6	90.6	32.6	34.7	36.1	29.1	26.3
TW70 HH	576042	130765	Roadside	90.6	90.6	26.8	28.6	29.7	25.4	25.3
TW71	560892	140403	Roadside	49.1	49.1	27.2	28.0	29.2	24.7	21.1
TW72	558149	142085	Roadside	75.5	75.0	29.0	20.3	21.3	19.0	16.6
TW73	557358	138134	Roadside	83.0	83.0	13.9	14.6	17.0	13.0	16.2
TW74	558138	142223	Roadside	92.5	92.5	18.0	19.7	18.6	19.8	13.1
TW75	559209	139319	Roadside	73.6	75.0	17.3	15.2	15.3	12.4	12.6
TW77	559816	140823	Roadside	66.0	66.0		23.9	24.7	20.7	18.8
TW82	559162	139393	Roadside	73.6	75.0		**41.7**	**42.5**	**40.8**	34.8
TW83	558782	139489	Roadside	90.6	90.6		24.5	26.4	24.4	20.3
TW84	558794	139786	Roadside	90.6	90.6		23.2	29.5	21.0	23.8
TW86	558280	139872	Roadside	81.1	81.1		15.9	14.6	13.9	16.9

☒ **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 in Central Tunbridge Wells

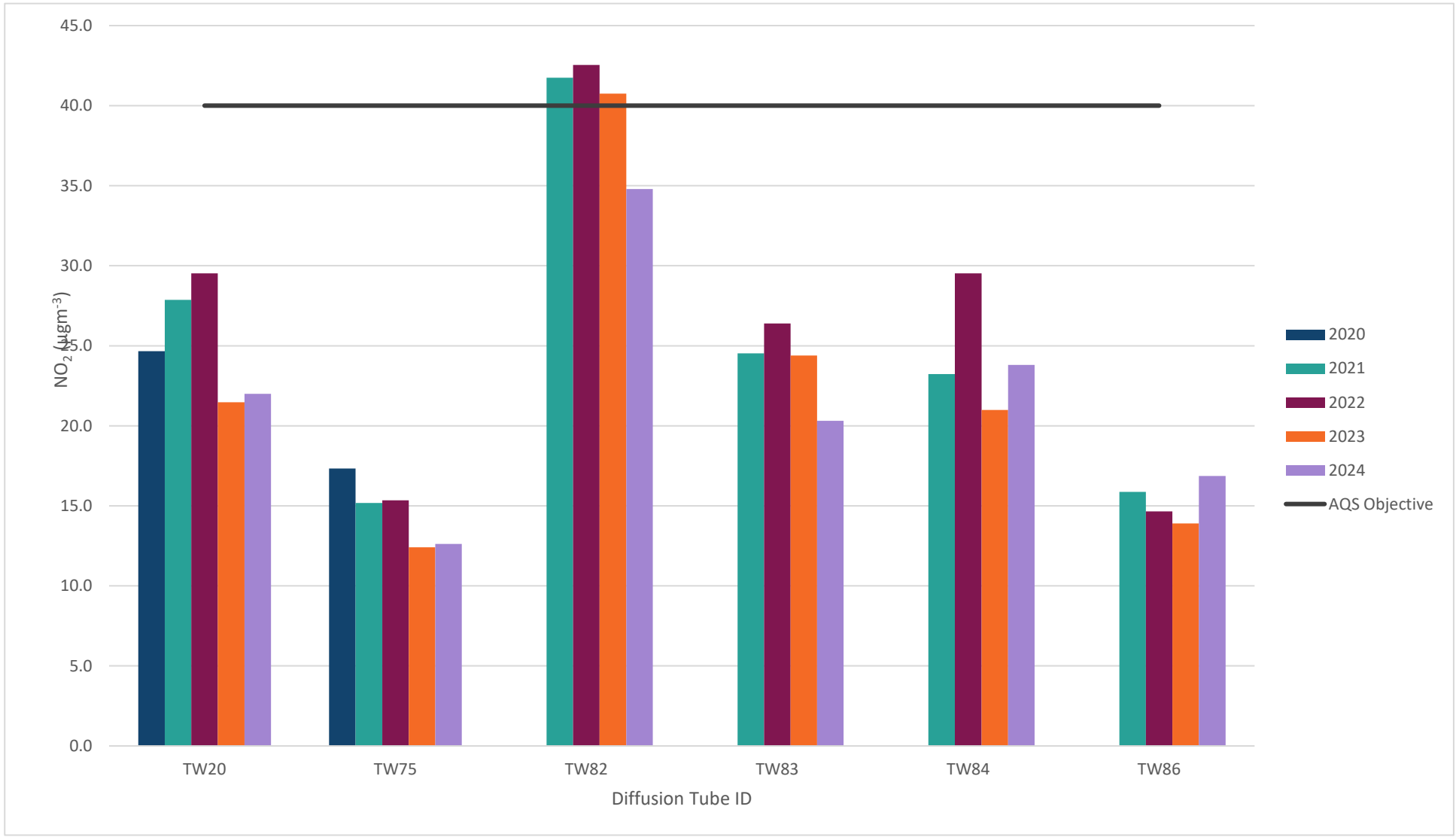


Figure A.2 – Trends in Annual Mean NO_2 Concentrations in the Tunbridge Wells East Area

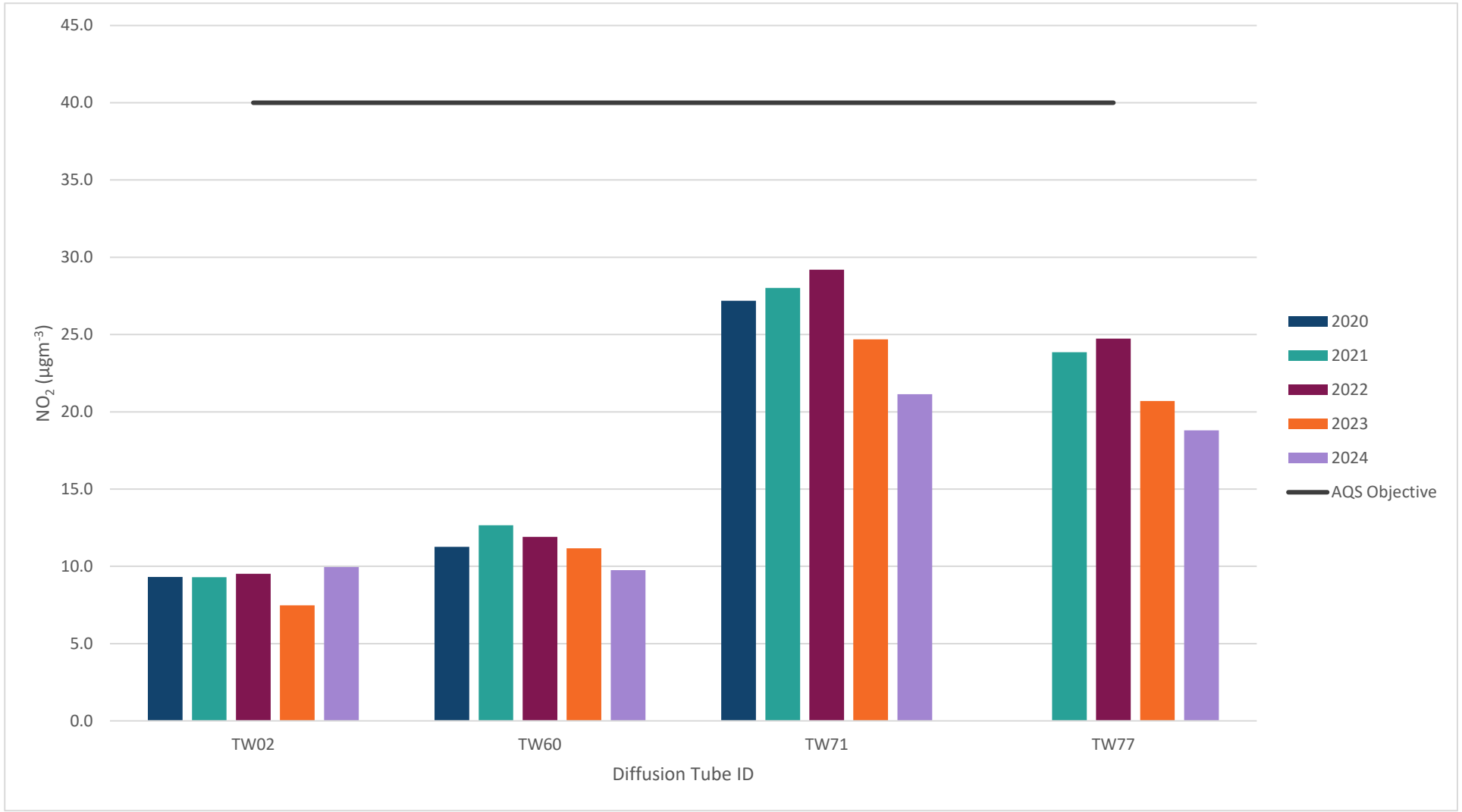


Figure A.3 – Trends in Annual Mean NO_2 Concentrations in Tunbridge Wells West Area

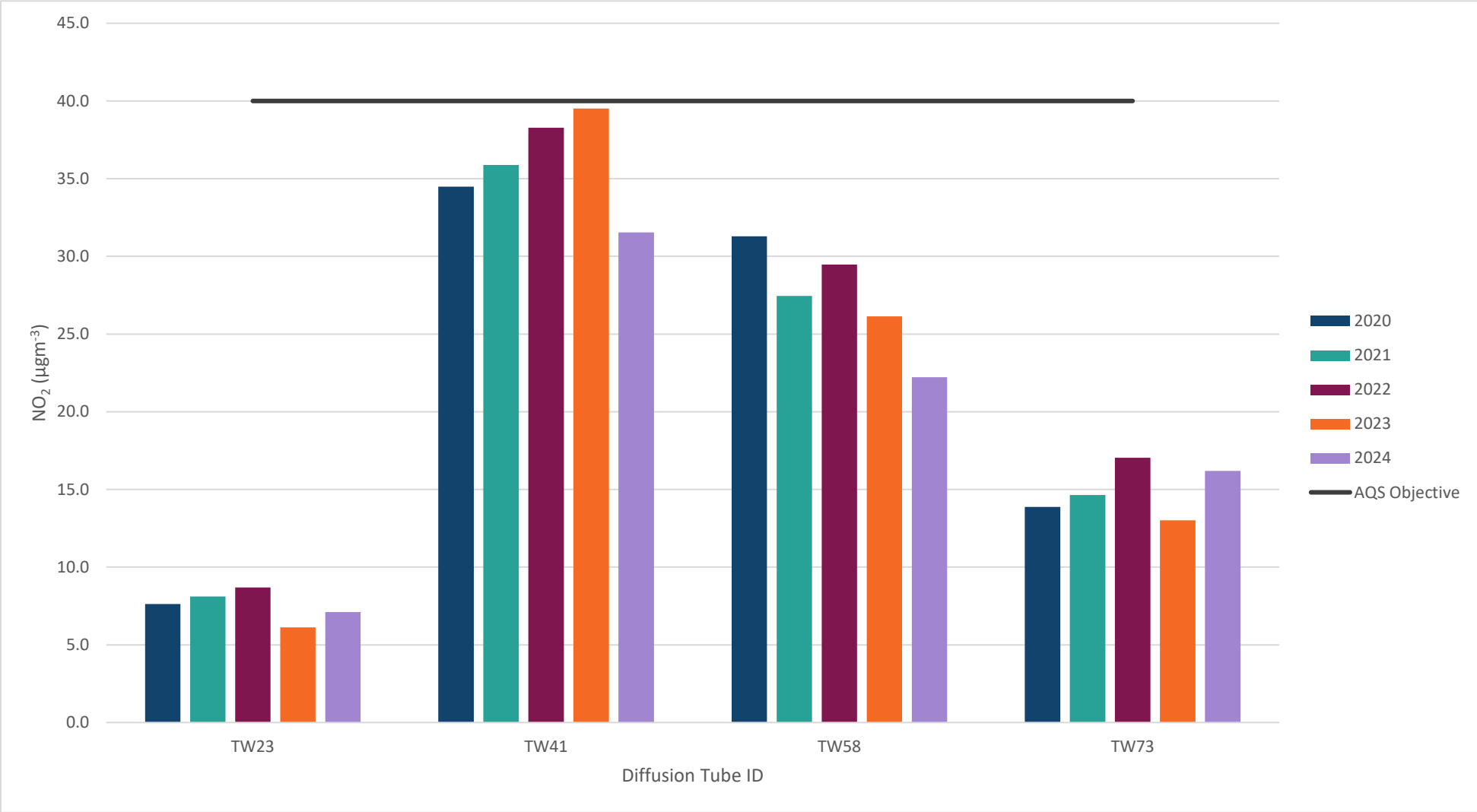


Figure A.4 – Trends in Annual Mean NO_2 Concentrations in Southborough Area

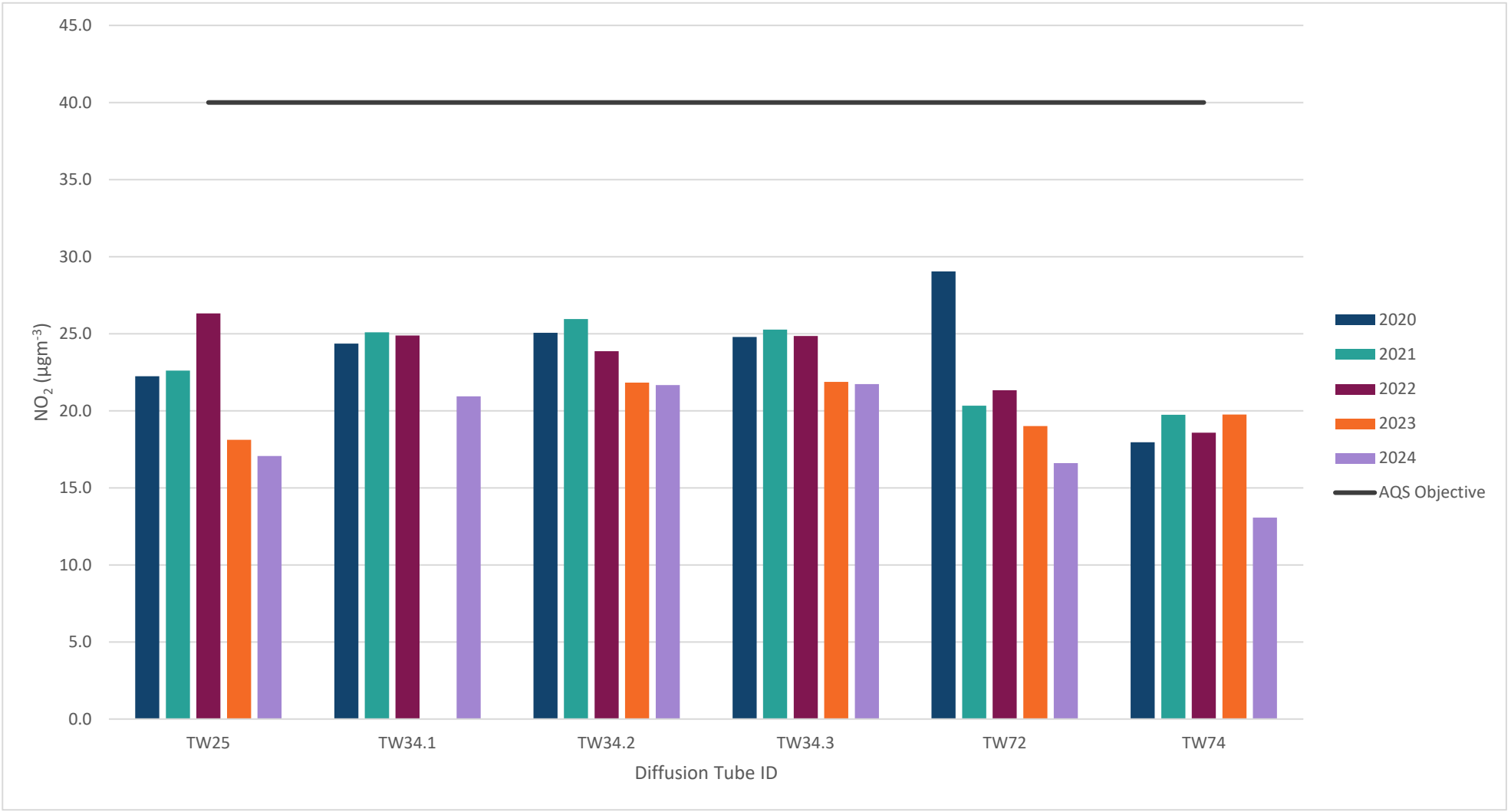


Figure A.5 – Trends in Annual Mean NO_2 Concentrations in Hawkhurst Area

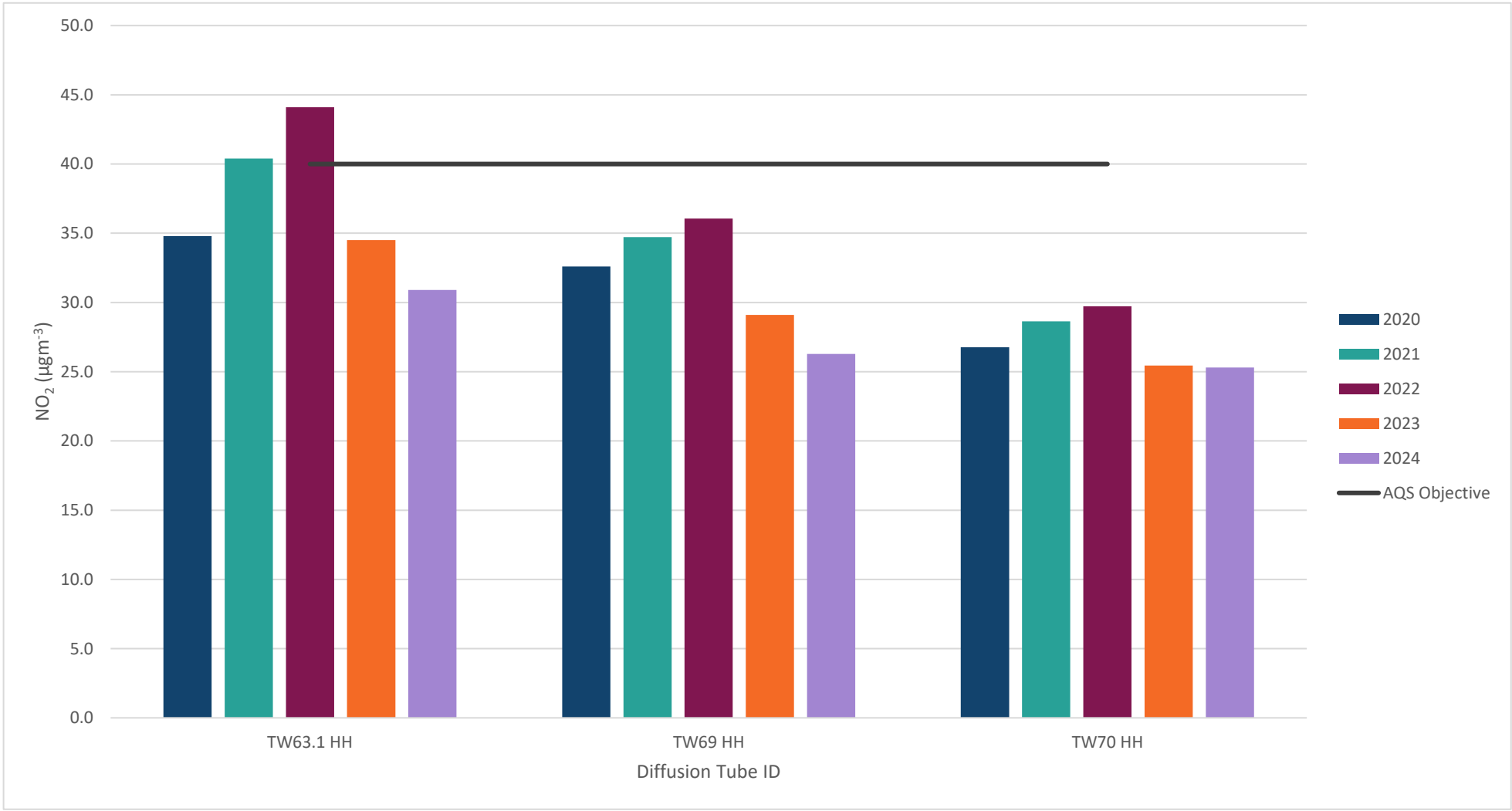


Figure A.6 – Trends in Annual Mean NO_2 Concentrations in Paddock Wood Area

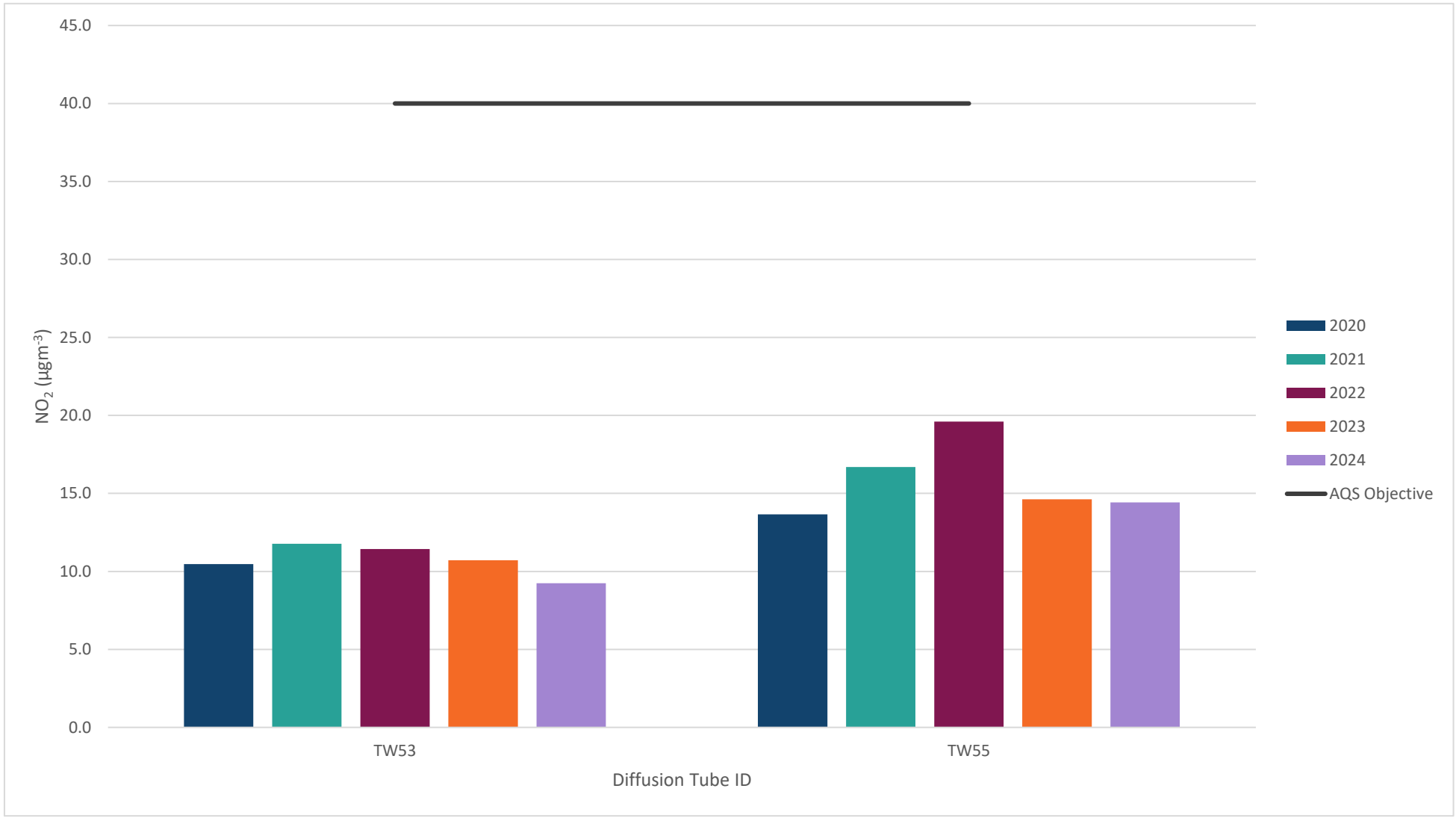


Table A.5 – 1-Hour Mean NO_2 Monitoring Results, Number of 1-Hour Means > 200µg/m^3

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
CM1	558260	141750	Roadside	99.5	99.5	0	0	0	0	0

Notes:

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

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

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

(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

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 2024 (%) (2)	2020	2021	2022	2023	2024
CM1	558260	141750	Roadside	98.4	98.4	18	19	21	20	17.6

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

Notes:

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

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.7 – Trends in Annual Mean PM_{10} Concentrations

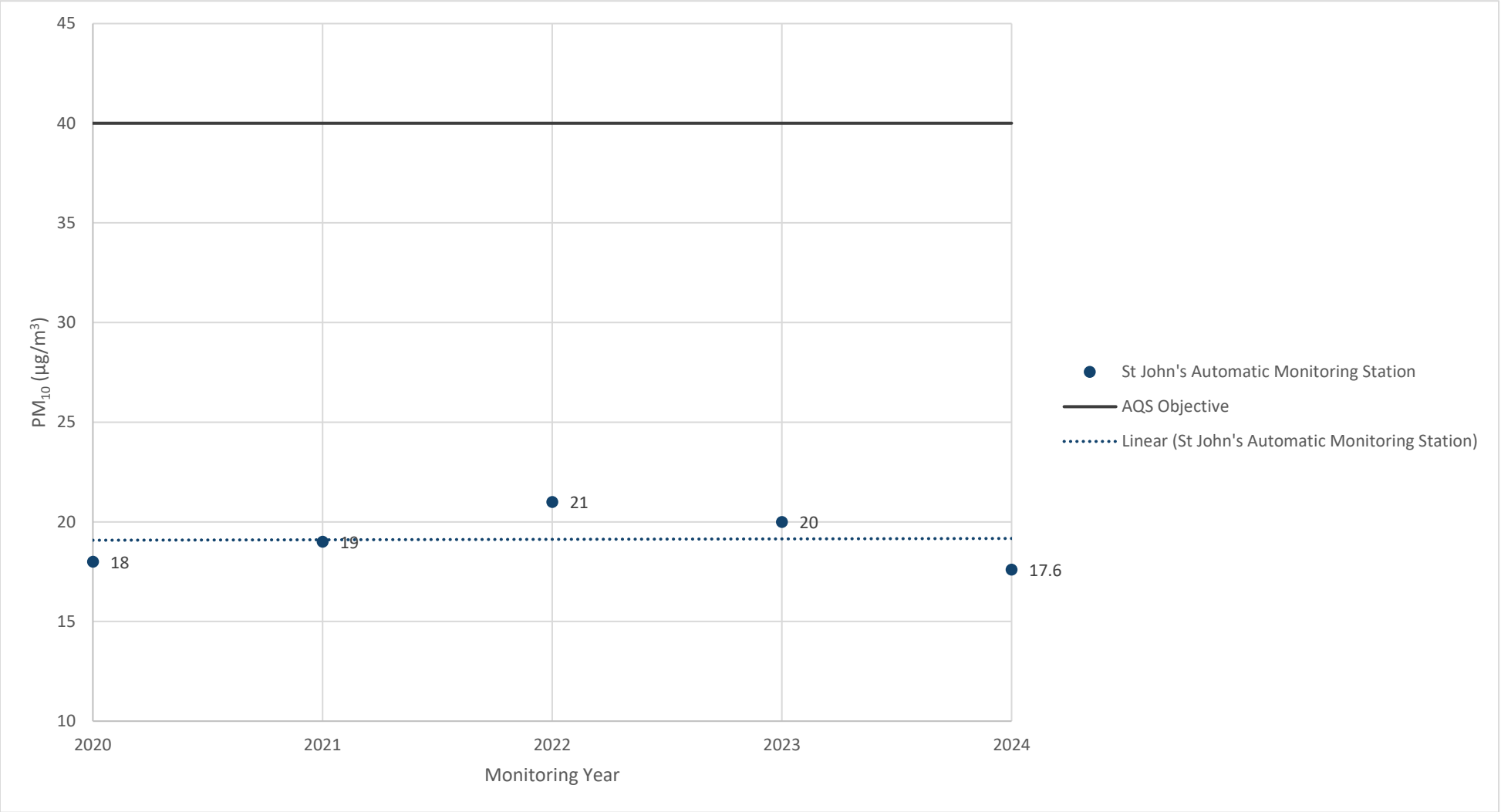


Table A.7 – 24-Hour Mean PM_{10} Monitoring Results, Number of PM_{10} 24-Hour Means > 50µg/m^3

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
CM1	558260	141750	Roadside	98.4	98.4	10	1	2	0	0

Notes:

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

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

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

(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

Figure A.8 – Trends in Number of 24-Hour Mean PM_{10} Results > 50µg/m^3

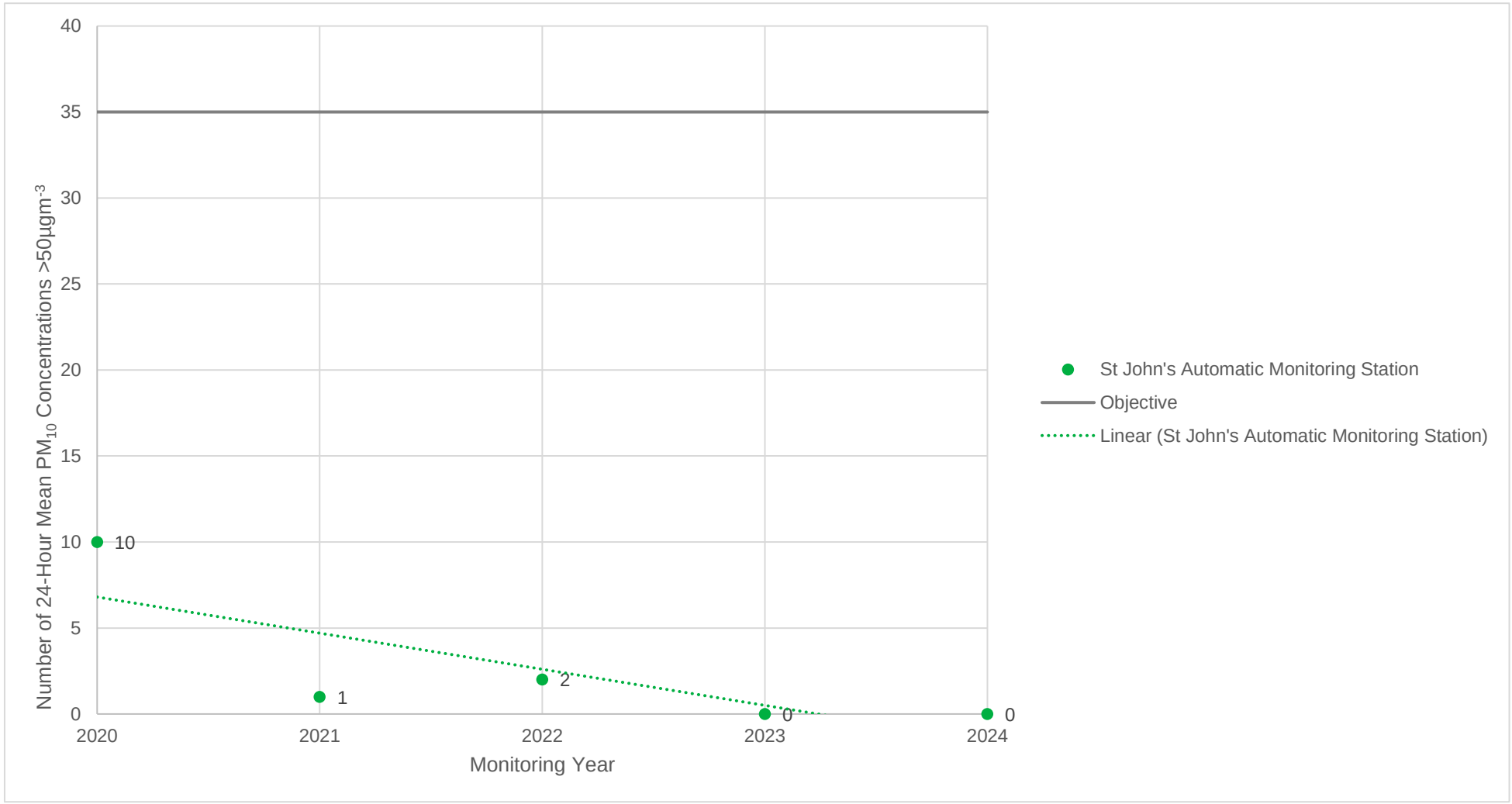


Table A.8 – Annual Mean $PM_{2.5}$ Monitoring Results (µg/m^3)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
CM1	558260	141750	Roadside	84.5	84.5	N/A	N/A	8	7	7.8

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

Notes:

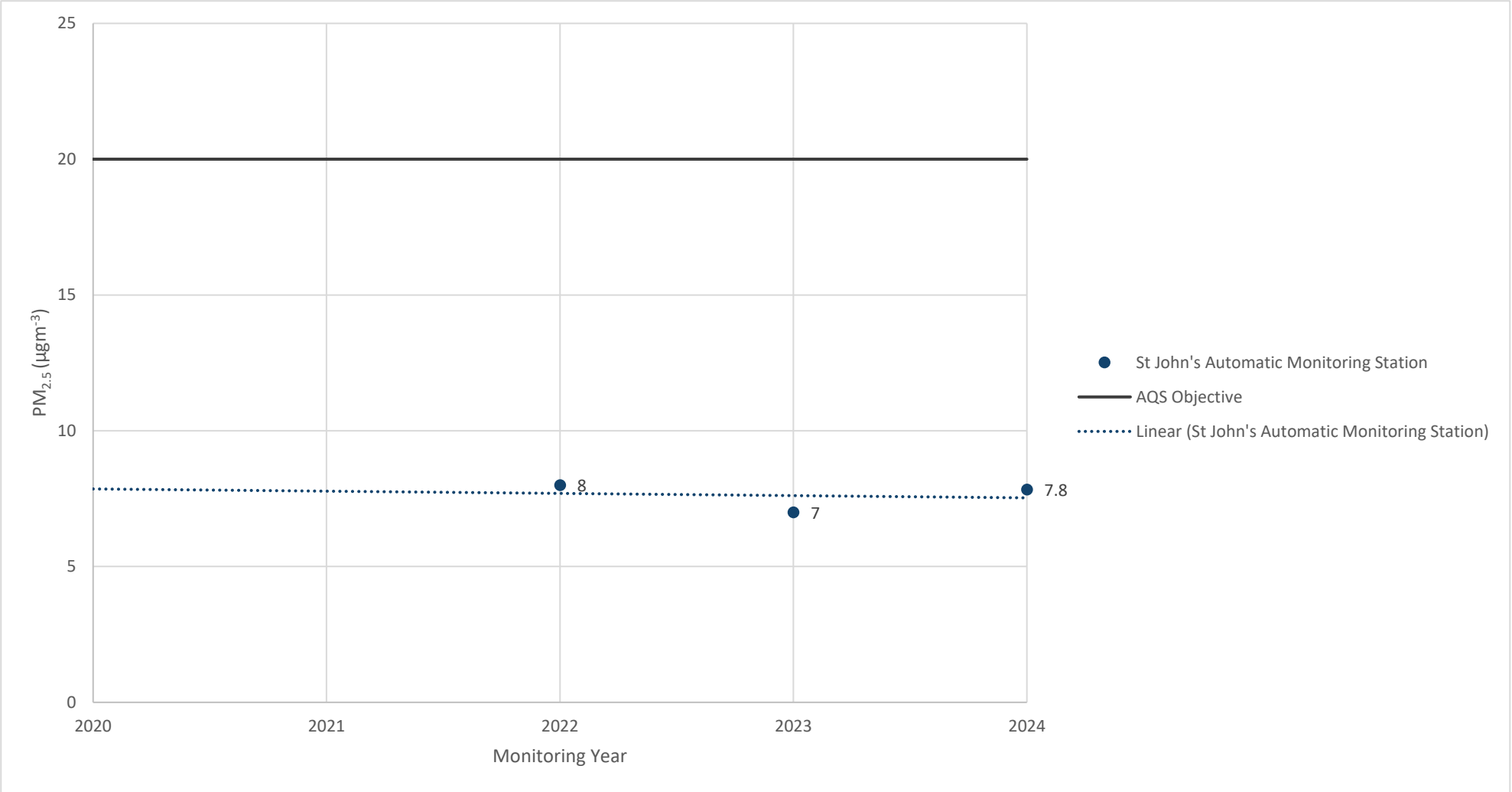
The annual mean concentrations are presented as µg/m^3.

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



Appendix B: Full Monthly Diffusion Tube Results for 2024

Table B.1 – NO_2 2024 Diffusion Tube Results (µg/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 (0.78)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
TW02	560022	141249	53.8	8.9	8.9	9.0	10.0	8.2	5.6	6.9	6.3	13.4	11.0	11.2	12.8	10.0	-	
TW20	558303	139903		30.3	29.7	32.1					29.5	32.3	23.7		29.6	22.0	-	
TW23	558748	138219	20.2	9.8	8.1	7.0		7.3	6.6	3.4	6.3	12.0	10.4		9.1	7.1	-	
TW25	558142	142004	27.6	28.7	24.8			20.4	21.7	19.5	16.8	30.7	4.7	23.8	21.9	17.1	-	
TW34.1	558260	141605	18.0	27.6	28.7	29.1	25.0	34.7	25.9	27.2	24.8			27.3	-	-	-	Triplicate Site with TW34.1, TW34.2 and TW34.3 - Annual data provided for TW34.3 only
TW34.2	558260	141605		31.2	26.4	30.0	24.4	29.9	26.9	27.3	23.3	27.4		30.9	-	-	-	Triplicate Site with TW34.1, TW34.2 and TW34.3 - Annual data provided for TW34.3 only
TW34.3	558260	141605	42.1	28.4	27.9	30.5	24.9	28.3	22.6	26.8	23.1			23.9	27.6	21.5	-	Triplicate Site with TW34.1, TW34.2 and TW34.3 - Annual data provided for TW34.3 only
TW41	558070	138756	19.3	40.2	51.0			47.3	45.1						40.6	31.5	-	
TW53	566874	145076		21.0	5.3	9.8	13.8		6.6	9.8	7.3	14.8	18.2		11.8	9.2	-	
TW55	566803	144107	19.3	27.9		14.9	22.0	22.4	10.2	14.3	9.2	21.2	23.6		18.5	14.4	-	
TW58	557948	138620	16.4	30.8	31.2			15.3	31.1	32.5	34.3	33.1			28.1	22.2	-	
TW60	560234	140146		11.2	13.6			11.2	9.9	10.4	9.8	16.1	14.6	15.8	12.5	9.8	-	
TW63.1 HH	576056	130592	23.7			25.5			26.6	46.2	31.9	48.2	50.0		-	-	-	Triplicate Site with TW63.1 HH, TW63.2 HH and TW63.3 HH - Annual data provided for TW63.3 HH only
TW63.2 HH	576056	130592	23.7		25.7	29.9	50.4	67.9	26.6	47.5	30.0	45.9	50.4		-	-	-	Triplicate Site with TW63.1 HH, TW63.2 HH and TW63.3 HH - Annual data provided for TW63.3 HH only
TW63.3 HH	576056	130592				30.0	51.7	66.2	26.2			48.6	45.1		39.6	30.9	-	Triplicate Site with TW63.1 HH, TW63.2 HH and TW63.3 HH - Annual data provided for TW63.3 HH only
TW69 HH	576068	130619	21.0	56.7	12.6	23.4	40.6	59.6	16.3	37.7	26.0	35.1	41.8		33.7	26.3	-	

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 (0.78)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
TW70 HH	576042	130765	22.1	57.7	16.5	22.4	36.3	53.1	18.5	39.5	24.3	35.2	31.2		32.4	25.3	-	
TW71	560892	140403	36.6				34.6	44.9			7.0	25.5	31.9		30.1	21.1	-	
TW72	558149	142085		19.8	23.4			19.3	15.2	15.9	21.8	27.1	19.6	29.5	21.3	16.6	-	
TW73	557358	138134	32.2	18.4	17.1	21.5	15.5	37.2	14.6	13.1		18.8	19.2		20.8	16.2	-	
TW74	558138	142223		11.3	18.2	20.7	19.8	23.9	20.8	7.6	15.5	19.3	15.8	11.5	16.8	13.1	-	
TW75	559209	139319	21.9	17.9	16.4			17.0	16.4	12.1	14.4	16.1	13.5		16.2	12.6	-	
TW77	559816	140823	27.3	30.2	28.2	22.7	25.8	28.9				20.9	21.4		25.7	18.8	-	
TW82	559162	139393	18.2	37.2	46.2	56.4	49.2	59.6	44.4			48.7	41.5		44.6	34.8	-	
TW83	558782	139489	16.8	31.4	19.6	30.5	26.6	27.7	25.2	21.5	27.8	32.3	27.1		26.0	20.3	-	
TW84	558794	139786	29.1	37.4	34.2	36.6	28.0	17.8	35.1	32.8	26.3	31.7	26.7		30.5	23.8	-	
TW86	558280	139872	26.7	17.0	14.8	18.8	28.4	32.3	28.3		13.3	19.4	17.3		21.6	16.9	-	

☒ **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.**

☒ **Tunbridge Wells Borough Council confirm that all 2024 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 Tunbridge Wells Borough During 2024

No new sources relating to air quality were determined in 2024.

Additional Air Quality Works Undertaken by Tunbridge Wells Borough Council During 2024

The Tunbridge Wells A26 AQMA had demonstrated compliance with national objectives for five consecutive years and therefore the AQMA was revoked in 2024.

QA/QC of Diffusion Tube Monitoring

All diffusion tubes deployed in Tunbridge Wells Borough during 2024 were supplied by Socotec (Didcot). Socotec is a UKAS accredited laboratory and participates in the in the new AIR-PT (Proficiency Test) Scheme previously known as the Workplace Analysis Scheme for Proficiency (WASP)) for NO_2 tube analysis and the Annual Field Inter-Comparison Exercise. These provide strict performance criteria for participating laboratories to meet, thereby ensuring NO_2 concentrations reported are of a high calibre. The lab follows the procedures set out in the Harmonisation Practical Guidance. In the latest available results, Socotec Didcot scored as follows: AIR-PT AR062 (Jan to Feb 2024) 100%, AIR-PT AR063, (Apr to June 2024) 100%, AIR-PT AR065 (July to August 2024) 100% and AIR-PT AR066 (September to October 2024) 100%. The percentage score reflects the results deemed to be satisfactory based upon the z-score of $< \pm 2$. Based on 33 studies, 90.91% of all local Authority co-location studies in 2024, using the 50% TEA in acetone preparation method, were rated as ‘good’ (tubes are considered to have "good" precision where the coefficient of variation of duplicate or triplicate diffusion tubes for eight or more periods during the year is less than 20%). All diffusion tubes were deployed in accordance with the 2024 diffusion tube calendar.

Diffusion Tube Annualisation

Five non-automatic monitoring sites required annualization as they achieved less than 75% data capture. The sites requiring annualization were TW20, TW41, TW58, TW71, TW77

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

Site ID	Annualisation Factor Rochester Stoke	Annualisation Factor Thurrock	Average Annualisation Factor	Raw Data Annual Mean	Annualised Annual Mean
TW20	0.9399	0.9661	0.9530	29.6	28.2
TW41	1.0070	0.9861	0.9965	40.6	40.4
TW58	1.0162	1.0132	1.0147	28.1	28.5
TW71	0.8656	0.9360	0.9008	30.1	27.1
TW77	0.9181	0.9595	0.9388	25.7	24.1

Diffusion Tube Bias Adjustment Factors

The diffusion tube data presented within the 2024 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.

Tunbridge Wells Borough Council have applied a national bias adjustment factor of 0.78 to the 2024 monitoring data. A summary of bias adjustment factors used by Tunbridge Wells Borough Council over the past five years is presented in Table C.2.

Typically, where we have achieved sufficient data capture from passive monitoring sites, Tunbridge Wells Borough Council prefers to choose a local bias correction factor rather than the national bias correction factor. In 2024, while sufficient data capture was achieved, there was poor precision in the co-located diffusion tubes at the automatic monitoring station, and this has made us cautious in using the local bias correction factor calculated at 0.71. This calculated local bias correction factor is considerably lower than

the the national bias correction factor from our laboratory, Ricardo. Tunbridge Wells Borough Council had used the national bias correction factor in 2023 (which was calculated at 0.77), and previously local bias correction factors had been calculated at 0.79, 0.76 and 0.76 in 2022, 2021 and 2020, respectively. It is likely the actual local bias correction is somewhere in between the calculated local factor and the national factor Therefore to balance the concerns of poor overall tube precision; we have elected to use the national bias correction factor which is higher than the local factor to demonstrate worst-case scenario concentrations of pollutants.

Table C.2 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2024	National	04/25	0.78
2023	National	03/24	0.77
2022	Local		0.79
2021	Local		0.76
2020	Local		0.76

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.

No diffusion tube NO_2 monitoring locations within Tunbridge Wells Borough required distance correction during 2024, however example calculations have been provided for the monitoring sites showing the highest annual concentrations (TW41 and TW82) in the borough and for monitoring site adjacent to the A26 automatic monitoring station (TW34) to provide an analysis of concentrations at the relevant residential exposure.

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

Site ID	Distance (m): Monitoring Site to Kerb	Distance (m): Receptor to Kerb	Monitored Concentration (Annualised and Bias Adjusted	Background Concentration	Concentration Predicted at Receptor	Comments
TW41	1.8	4.8	31.5	9.8	26.6	
TW82	1.0	7.5	34.8	9.8	24.6	
TW34	4.0	14.0	21.5	8.6	17.0	

QA/QC of Automatic Monitoring

Calibration of the Automatic monitoring station on St John's Road is undertaken fortnightly by Tunbridge Wells Borough Council's Environmental Protection Team. Matt's Monitors undertake 6 monthly servicing, and the QA/QC is part of the Kent and Medway Air Quality Monitoring Network (KMAQN) which includes daily data checks and annual audits. The KMAQN contract is run by Ricardo Energy and Environment who ratify the data. Data is available on the KentAir website along with Tunbridge Wells Borough Council's previous ASRs.

QA/QC of Automatic Air Quality Instruments

Data ratification in Tunbridge Wells Borough was undertaken by Ricardo Energy and Environment

Air quality measurements from automatic instruments are validated and ratified to the standards of the AURN and those described in the Local Air Quality Management – Technical Guidance LAQM (TG22) https://laqm.defra.gov.uk/technical-guidance

Validation

This process operates on data during the data collection stage. All data are continually screened algorithmically and manually for anomalies. There are several techniques designed to discover spurious and unusual measurements within a very large dataset. These anomalies may be due to equipment failure, human error, power failures, interference or other disturbances. Automatic screening can only safely identify spurious results that need further manual investigation.

Raw data from the gaseous instruments (e.g., NOx, O3, SO2 and CO) are scaled into concentrations using the latest values derived from the manual and automatic calibrations. These instruments are not absolute and suffer drifts. Both the zero baseline (background) and the sensitivity may change over time. Regular calibrations with certified gas standards are used to measure the zero and sensitivity. However, these are only valid for the moment of the calibration since the instrument will continue to drift. Raw measurements from particulate instruments (e.g., PM_{10} and $PM_{2.5}$) generally do not require scaling into concentrations. The original raw data are always preserved intact while the processed data are dynamically scaled and edited.

Ratification

This is the process that finalises the data to produce the measurements suitable for reporting. All available information is critically assessed so that the best data scaling is applied, and all anomalies are appropriately edited. Generally, this operates at three-, six- or twelve-month intervals. However, unexpected faults can be identified during the instrument routine services or independent audits which are often at 6-monthly intervals. In practice, therefore, the data can only be fully ratified in 12-month or annual periods. The data processing performed during the three- and six-monthly cycles helps build a reliable dataset that is finalised at the end of the year.

There is a diverse range of additional information that can be essential to the correct understanding and editing of data anomalies. These may include

· The correct scaling of data

· Ignoring calibrations that were poor e.g., a spent zero scrubber

· Closely tracking rapid drifts or eliminating the data

· Comparing the measurements with other pollutants and nearby sites

· Corrections due to span cylinder drift

· Corrections due to flow drifts for the particulate instruments

· Corrections for ozone instrument sensitivity drifts

· Eliminating measurements for NO_2 conversion inefficiencies

· Eliminating periods where calibration gas is in the ambient dataset

· Identifying periods where instruments are warming-up after a power cut

· Identification of anomalies due to mains power spikes

· Correcting problems with the date and time stamp

· Observations made during the sites visits and services

The identification of data anomalies, the proper understanding of the effects and the application of appropriate corrections requires expertise gained over many years of operational experience. Instruments and infrastructure can fail in numerous ways that significantly and visually affect the quality of the measurements. There are rarely simple faults that can be discovered by computer algorithms or can be understood without previous experience.

The PM_{10} concentrations require scaling into Gravimetric Equivalent concentration units by use of the Volatile Correction Model (VCM) http://www.volatile-correction-model.info or by corrections published by Defra https://uk-air.defra.gov.uk/networks/monitoring-methods?view=mcerts-scheme depending on the measurement technique.

QC Audits

Ricardo Energy & Environment carry out annual audits to rigorously evaluate analysers to obtain an assessment of performance level. This information, in conjunction with the full analyser data set and calibration and service records, help ensure data quality specifications have been met during the preceding period. Additionally, an assessment of the station calibration cylinder concentrations provides an indication that the cylinder concentrations remain stable and therefore suitable for data scaling purposes.

The following describes the audit process:-

1 Oxides of Nitrogen

1.1 Analyser Response Factors

A stable "intercalibration standard", validated against transfer standards, is transported to each site and is sampled by the analyser.

The analyser also samples from a cylinder containing certified metrology grade zero air, or catalytic scrubbers of known efficiency.

The analyser factor quoted is the response to the intercalibration standard, expressed in nmol.mol-1.logged unit-1, with the zero point being the response to zero air.

For oxides of nitrogen analysers, the NOx and NO channel response factors are derived from an NO in nitrogen cylinder.

1.2 Analyser Linearity

To determine analyser linearity, a series of amount fractions are produced (using dynamic dilution techniques) covering the analyser range. The analyser output is noted for each of these amount fractions. A linear regression is then carried out, relating analyser output to the dilution factor at each point. The linearity error is defined as the maximum residual of the regression slope.

1.3 Analyser noise levels.

This is defined here as the standard error of ten successive spot readings of analyser output when fully stabilised on zero (zero noise) or span (span noise) amount fraction.

1.4 NOx analyser Converter Efficiency

NO_2 to NO Converter efficiency is determined using gas point titration as follows:

A stable amount fraction of NO is produced, (by two stage dynamic dilution) and the analyser outputs, NOx and NO, are noted after a suitable stabilisation period.

Ozone is added to the sample, converting some NO to NO_2, note however, the total NOx in the sample remains constant. Again, following appropriate stabilisation times, the NOx and NO outputs are noted.

Converter (in)efficiency is defined as the change in scaled NOx signal as a percentage ratio of the change in the scaled NO signal.

1.5 Estimation of Site Cylinder Amount fractions

The site cylinder amount fractions are evaluated by sampling from the site cylinder and using the analyser response factors, to derive their amount fraction.

2 Particle Analysers.

2.1 Analyser Flow Rates

Flow rates are measured by calibrated flow audit measurement systems. A leak check is also carried out.

2.2 Analyser Calibration Constants

TEOM Analyser calibration constants are measured by consideration of the change in frequency induced by placing pre-weighed masses on the analyser sensors.

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

PM_{10} Data from the analysers used at Tunbridge Wells Borough Council does not require the application of a correction factor.

Automatic Monitoring Annualisation

Data capture at the A26 Roadside automatic monitoring station was over 75% for all monitored pollutants and therefore did not require annualization of data.

NO_2 Fall-off with Distance from the Road

Wherever possible, monitoring locations are representative of exposure. However, where this is not possible, the NO_2 concentration at the nearest location relevant for exposure has been estimated using the NO_2 fall-off with distance calculator available on the LAQM Support website. Where appropriate, automatic annual mean NO_2 concentrations corrected for distance are presented in Table A.3.

No automatic NO_2 monitoring locations within Tunbridge Wells Borough required distance correction during 2024, however a representative calculation has been provided for the predicted concentration at the nearest relevant receptor as an informative.

Table C.4 – Automatic NO_2 Fall off With Distance Calculations (concentrations presented in µg/m^3)

Site ID	Distance (m): Monitoring Site to Kerb	Distance (m): Receptor to Kerb	Monitored Concentration (Annualised and Bias Adjusted	Background Concentration	Concentration Predicted at Receptor	Comments
A26 Roadside	4.0	14.0	20.3	8.4	16.1	

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

Figure D.1 – Map of Non-Automatic Monitoring Sites in Central Tunbridge Wells Area

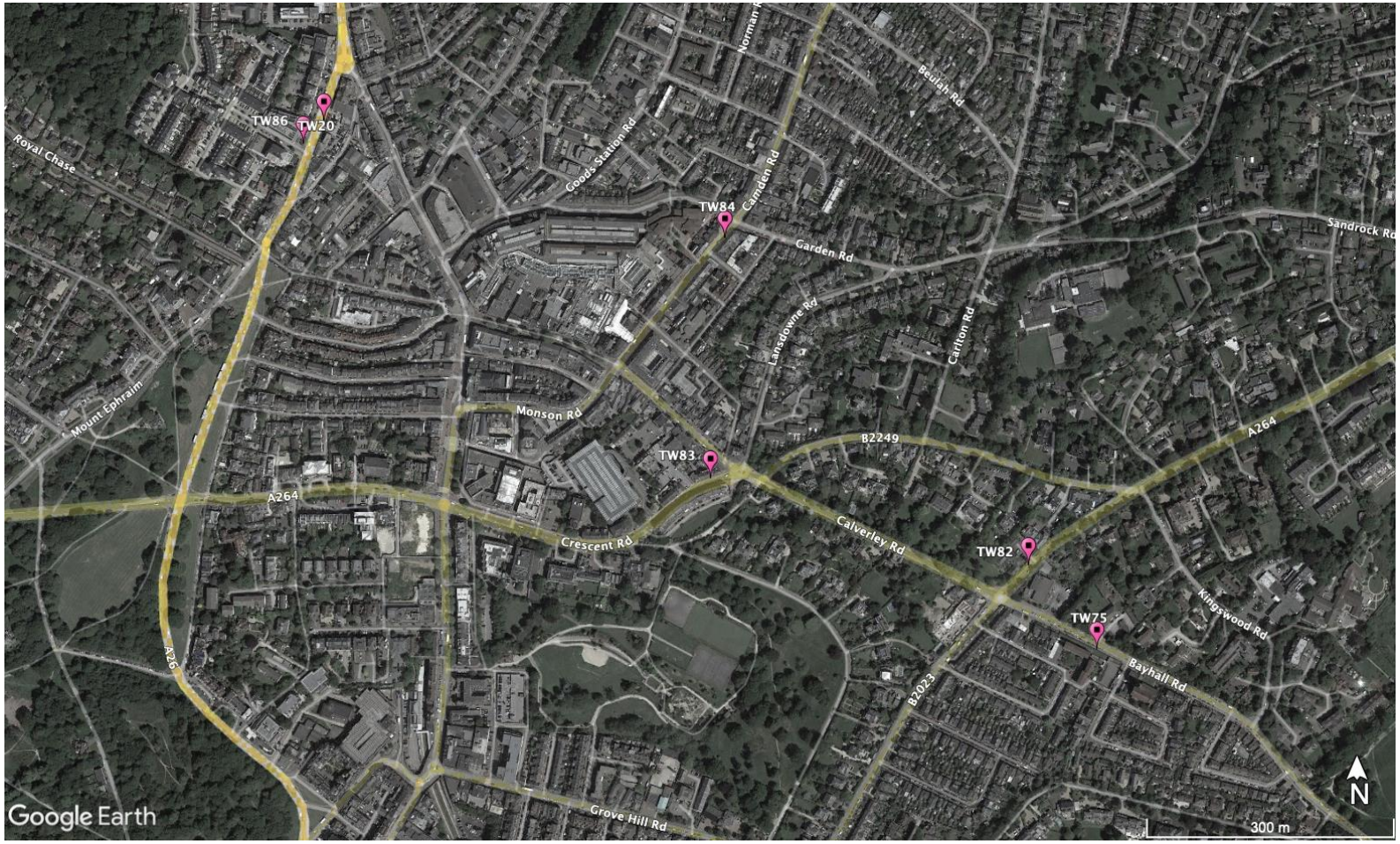


Figure D.2 – Map of Non-Automatic Monitoring Sites in Tunbridge Wells East Area

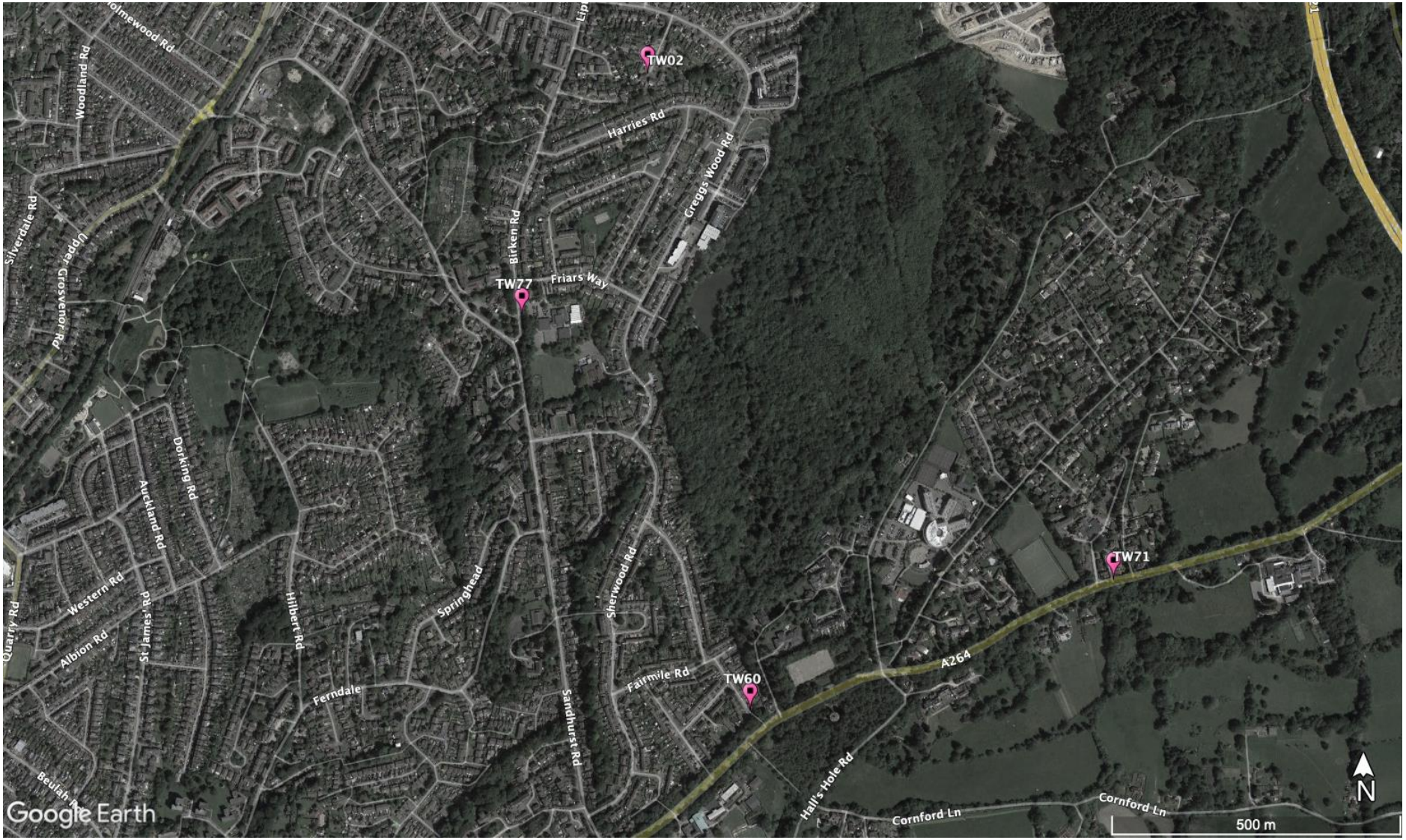


Figure D.3 – Map of Non-Automatic Monitoring Sites in Tunbridge Wells West Area

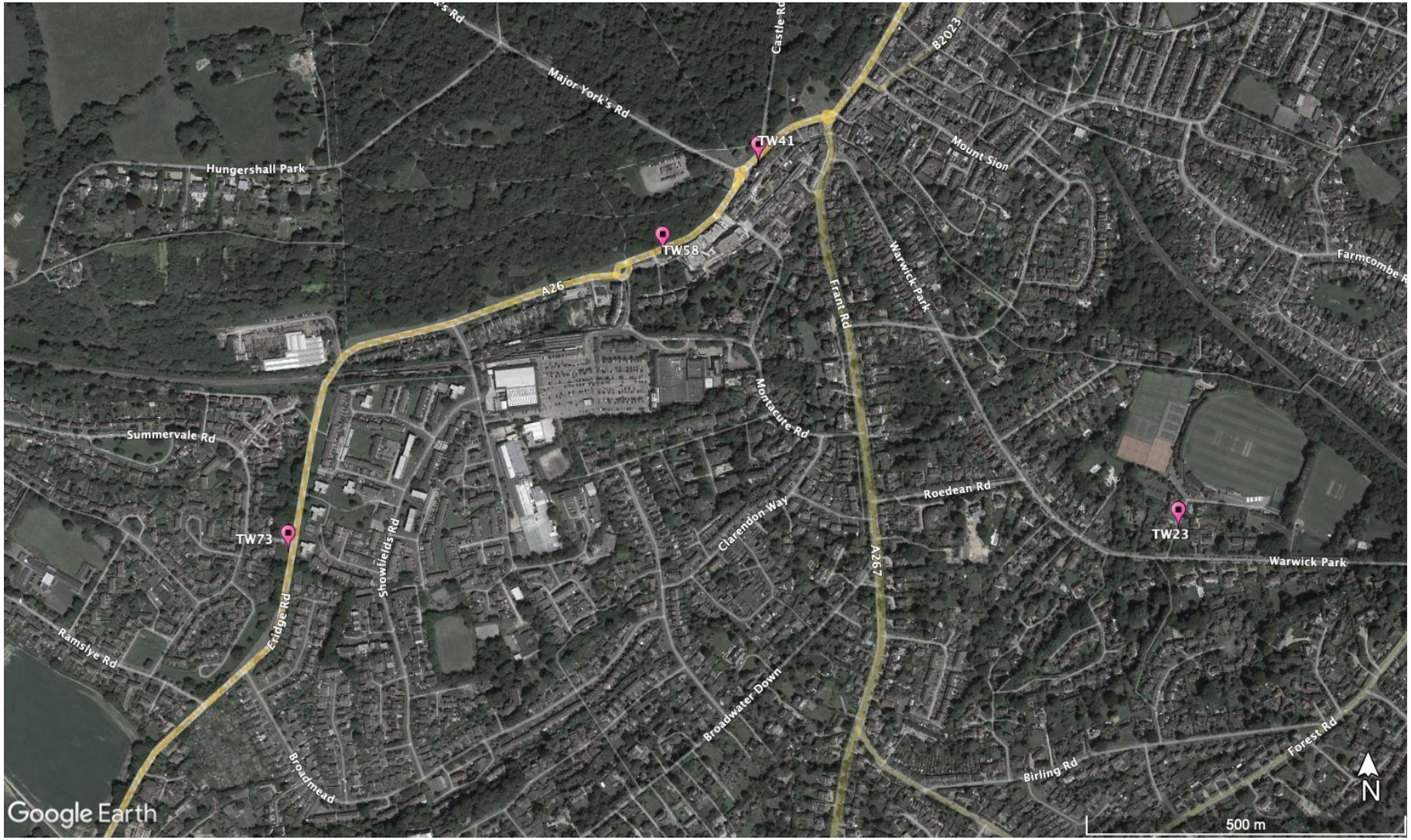


Figure D.4 – Map of Non-Automatic Monitoring Sites in Southborough Area

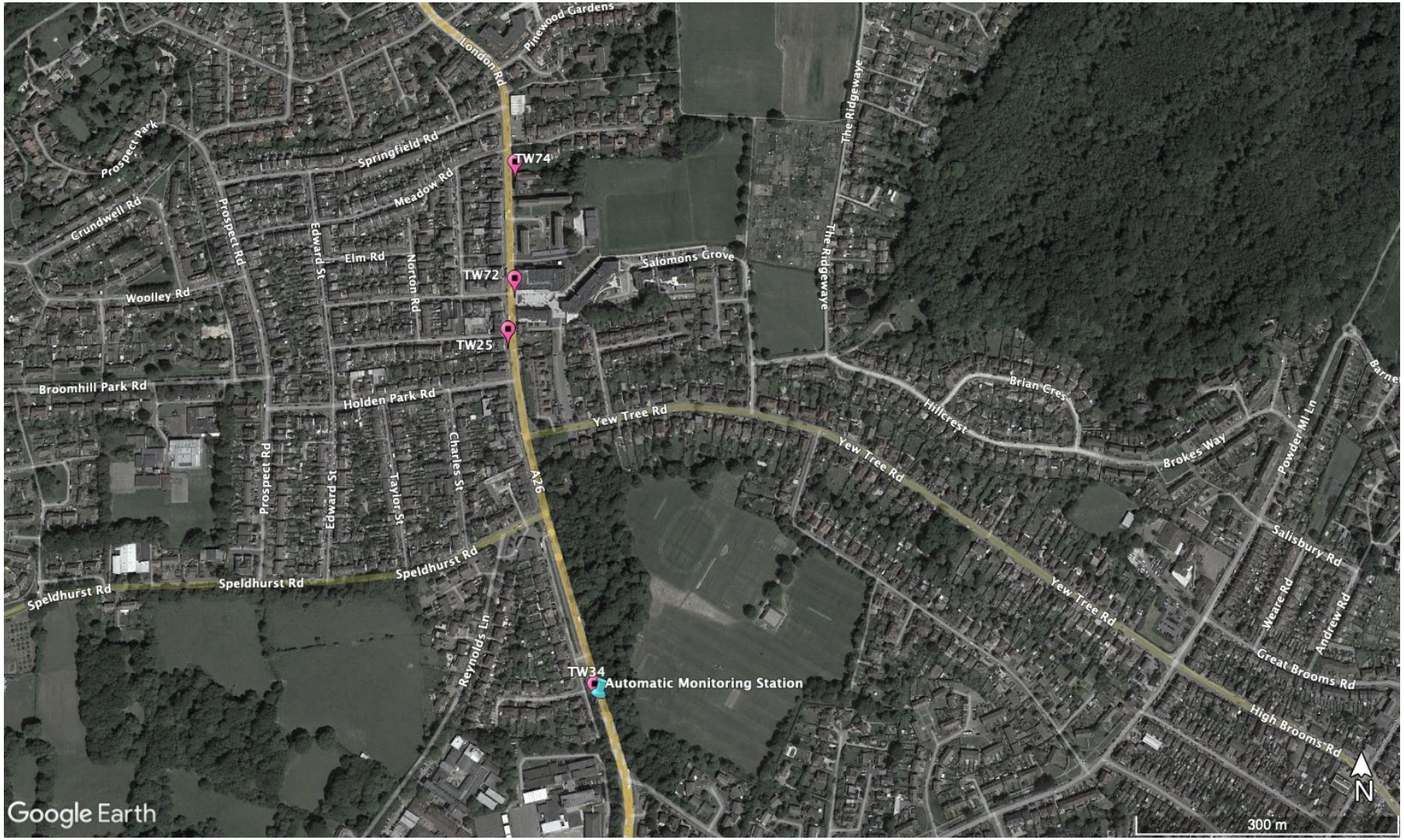
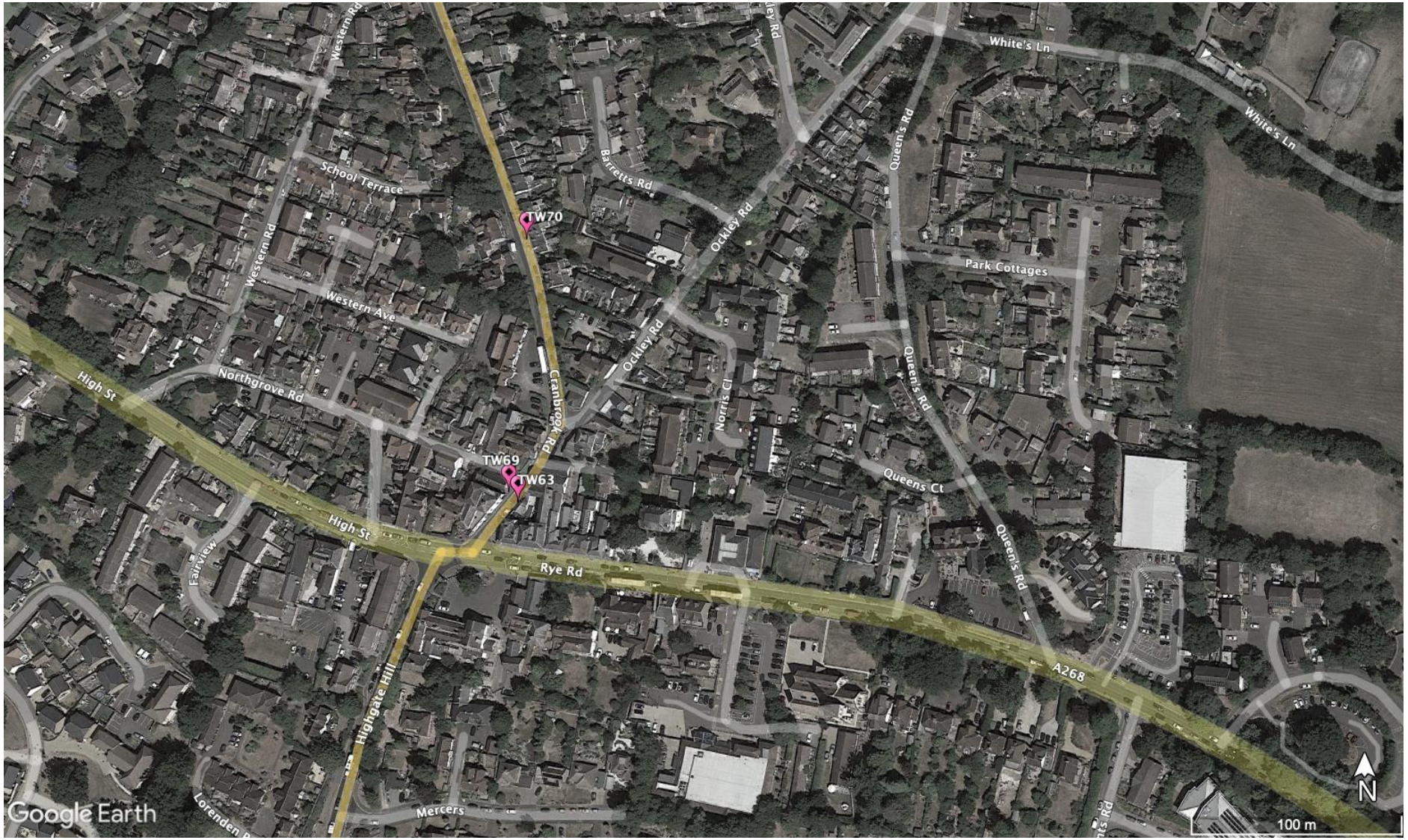


Figure D.5 – Map of Non-Automatic Monitoring Sites in Paddock Wood Area

Figure D.6 – Map of Non-Automatic Monitoring Sites in Hawkhurst Area



Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England[4]

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

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

Glossary of Terms

Abbreviation	Description
AQAP	Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the local authority intends to achieve air quality limit values'
AQMA	Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives
ASR	Annual Status Report
Defra	Department for Environment, Food and Rural Affairs
DMRB	Design Manual for Roads and Bridges – Air quality screening tool produced by National Highways
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.
- Land-Use Planning & Development Control: Planning for Air Quality Guidance. January 2017. Published by Environmental Protection UK and The Institute of Air Quality Management
- Public health profiles. Accessed May 2025. Published by the Office for Health Improvement & Disparities. https://fingertips.phe.org.uk/ © Crown copyright 2025
- 2023 Mid-year population estimates: Total population in Kent. July 2024. Published by Kent County Council.