2022 Air Quality Annual Status Report (ASR)

In fulfilment of Part IV of the Environment Act 1995 Local Air Quality Management

Date: July 2022

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Executive Summary: Air Quality in Our Area

Air Quality in Hart District Council

Air pollution is associated with a number of adverse health impacts. It is recognised as a contributing factor in the onset of heart disease and cancer. Additionally, air pollution 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].

The mortality burden of air pollution within the UK is equivalent to 28,000 to 36,000 deaths at typical ages[3], with a total estimated healthcare cost to the NHS and social care of £157 million in 2017[4].

Air Quality Management Areas (AQMAs) can be declared when there is an exceedance or likely to be an exceedance of an air quality objective. Hart District Council does not currently have any AQMAs.

Hart District Council measures nitrogen dioxide (NO_2) at 13 locations within the district using passive diffusion tubes. All annual average NO_2 concentrations measured during 2021 were below the 40 $\mu g.m^{-3}$ annual air quality objective. Measured annual mean NO_2 concentrations in the district have generally declined over the last five years, with the exception of 2021 as concentrations increased slightly compared to 2020. This is likely due to the easing of COVID-19 lockdown restriction as 2021 concentrations still remain below 2019 levels.

A review of planning applications, the local road network and industrial processes in the district has not identified any new major sources of emissions in 2021. However, there is currently an outline planning application at Owens Farm for a retirement care living

[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, July 2021

[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

development comprising up to 160 units (C2 use) and local community facilities, pedestrian and vehicular access, parking areas and landscaping which may have an impact on air quality in the future. There is also a planning application at Burford, West Street for the construction of 16 dwellings (8 x 2-bedroom, 6 x 3-bedroom and 2 x 4-bedroom) with associated access, landscaping, and parking (following the demolition of existing dwelling house).

Actions to Improve Air Quality

Whilst air quality has improved significantly in recent decades, and will continue to improve due to national policy decisions, there are some areas where local action is needed to improve air quality further.

The 2019 Clean Air Strategy[5] sets out the case for action, with goals to reduce exposure to harmful pollutants. The Road to Zero[6] sets out the approach to reduce exhaust emissions from road transport through a number of mechanisms; this is extremely important given that the majority of Air Quality Management Areas (AQMAs) are designated due to elevated concentrations heavily influenced by transport emissions.

Hart District Council have undertaken several measures to help improve air quality in the district by:

- Promoting the uptake of low and zero emission vehicles, including installation of a new electric vehicle charging point.
- Protecting air quality through their planning processes, new local plan and Local Transport Plans and strategies.
- Declaring a climate emergency to address the causes and impacts of the climate crisis threatening the environment, this includes pledging to make the district carbon neutral by 2040, whilst bringing forward the current 2040 target to 2035, for areas under direct control of Hart District Council.
- Approval of planning applications for new solar farms.

[5] Defra. Clean Air Strategy, 2019

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

Conclusions and Priorities

The NO_2 concentrations measured in Hart District Council were below the Air Quality Objective (AQO) at all measurement sites. A review of 2021 planning applications identified no new developments that are likely to have significant adverse impacts on air quality.

Hart District Council will continue to monitor NO_2 using a network of passive diffusion tubes and continue to encourage the uptake of low emission transport and protect air quality through the local planning process.

Local Engagement and How to get Involved

A key source of localised air pollution is road traffic. The public can help improve air quality within Hart District Council by:

- Using your car less and use public transport instead if you can
- Walk or cycle (which is good for your health too)
- Car share if possible
- Use a low emission vehicle such as an electric or hybrid car
- Avoid driving during congested peak traffic periods

DEFRA have published their Clean Air Strategy 2019 document highlighting sources of air pollution and the best approach to reducing emissions. For more information please visit https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/770715/clean-air-strategy-2019.pdf

Public Health England have published an air pollution guidance document (available at https://www.gov.uk/government/publications/health-matters-air-pollution/health-matters-air-pollution). This guidance focuses on the health impacts and cost that air pollution can impose on the population, highlighting the financial and social need to reduce air pollution.

Local Responsibilities and Commitment

This ASR was prepared by the Environmental Health Team of Hart District Council with the support and agreement of the following officers and departments:

- Planning Policy Team

- Place Services
- Member for Regulatory
- Climate Change Communications and Engagement Officer
- Environmental Health Team

This ASR has been approved by:

- Head of Place Services

If you have any comments on this ASR please send them to the Environmental Health Department at:

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1 Local Air Quality Management

This report provides an overview of air quality in Hart District Council during 2021. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995) 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 pursuit of the objectives. This Annual Status Report (ASR) is an annual requirement showing the strategies employed by Hart District Council to improve air quality and any progress that has been made.

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

2 Actions to Improve Air Quality

2.1 Air Quality Management Areas

Air Quality Management Areas (AQMAs) are declared when there is an exceedance or likely exceedance of an air quality objective. After declaration, the authority should prepare an Air Quality Action Plan (AQAP) within 12 months setting out measures it intends to put in place in pursuit of compliance with the objectives.

Hart District Council currently does not have any declared AQMAs. For reference, a map of Hart District Council monitoring locations is presented in Appendix D.

2.2 Progress and Impact of Measures to address Air Quality in Hart District Council

Defra's appraisal of last year's ASR concluded that the passive monitoring results continue to demonstrate that Hart District Council is compliant with national air quality objectives. Hart District Council were commended on their intention to adhere with good practice and continually review their monitoring locations to ensure the identification of any hotspot areas.

Hart District Council has taken forward a number of direct measures during the current reporting year of 2021 in pursuit of improving local air quality as part of an integrated approach to Climate Change, Health and wellbeing / promotion of a healthy lifestyle, and the environment. Details of all measures completed, in progress or planned are set out in Table 2.1. Five measures are included within Table 2.1, with the type of measure and the progress Hart District Council have made during the reporting year of 2021 presented. Where there have been, or continue to be, barriers restricting the implementation of the measure, these are also presented within Table 2.1.

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

- Installation of an electric vehicle charging point

Hart District Council expects the following measures to be completed over the course of the next reporting year:

- Encourage modal shift to more sustainable transport options - Develop Hart's Green Grid Strategy including first stages of implementation to encourage better sustainable transport links between settlements and public transport hubs.
- Offsetting Project - Planting wild gardens, urban trees, living walls in car parks and green/living roofs to further reduce air pollution and carbon reduction throughout Hart.
- Transition Hart District Council fleet vehicles to ultra-low / low emission vehicles – to introduce zero emission vehicles to Hart District Council fleet. This measure will look at both associated carbon emission savings and air pollution improvements.

Hart District Council's priorities for the coming year are:

- Continuing passive monitoring throughout the council and compliance with the air quality levels
- Implementing the Climate Change Action Plan

2.2.1 Air Quality Management and Climate Change

- In April 2021, Hart District Council declared a Climate Emergency, committing to becoming a carbon neutral authority by 2035 (brought forward from 2040) and a carbon neutral district by 2040.
- Hart District Council's Climate Change Action Plan, sets out the start of the roadmap and also considers the co-benefits of tacking climate change, such as air pollution from transport.
- The action plan includes a range of measures aimed at increasing sustainability including improving air quality through policy and operational measures (see Table 2.1 for more information). Further information is available at https://www.hart.gov.uk/climate-change-0.
- Furthermore, Hart District Council support and encourage a modal shift towards more sustainable forms of transport such as walking, cycling and public transport, as well as the use of ultra-low and low emission vehicles and the Government's commitment to zero emission vehicles.

The principal challenges and barriers to implementation that Hart District Council anticipates are delays due to the COVID-19 pandemic.

Hart District Council anticipates that the measures stated above and in Table 2.1 will contribute to continued compliance with the national air quality objectives.

2.2.2 How Hart District Council's planning policy will benefit air pollution

Hart District Council adopted the Hart Local Plan (Strategy and Sites) 2032 on 30 April 2020. There are no AQMAs in the district for the adopted Hart Local Plan 2032 to take account of. The Hart Local Plan 2032 was prepared in accordance with national planning policy and guidance and includes policy NBE11 Pollution. The policy complies with and contributes towards European Union (EU) limit values and national objectives for pollutants and the cumulative impacts on air quality from individual sites in local areas (in

accordance with National Planning Policy Framework (NPPF) paragraph 181[7], and National Planning Policy Guidance (NPPG) paragraph 002 Reference ID: 32-002-20191101[8]). Policy NBE11 Pollution contained in the Hart Local Plan 2032 reads as follows:

> ***Policy NBE11 Pollution***
>
> *Development will be supported provided:*
>
> *a) it does not give rise to, or would be subject to, unacceptable levels of pollution (including cumulative effects); and*
> *b) it is satisfactorily demonstrated that any adverse impacts of pollution, either arising from the proposed development or impacting on proposed sensitive development or the natural environment will be adequately mitigated or otherwise minimised to an acceptable level.*
>
> *Where development is proposed on or near a site that may be impacted by, or may give rise to, pollution, such a proposal must be accompanied by an assessment that investigates the risks associated with the site and the possible impacts on the development, its future users and the natural and built environment. The assessment shall propose adequate mitigation or remediation when required to achieve a safe and acceptable development. Impacts on air quality should be considered in combination with other relevant plans or projects.*

The Hart Local Plan 2032 also contains Policy INF3 Transport which requires developments that would generate a significant transport impact to incorporate measures to reduce the need to travel by car and promote sustainable forms of travel, for example through travel plans. For more on travel plans see Hampshire County Council (HCC) website at https://www.hants.gov.uk/transport/developers/travelplans

Additionally, to support the Hart Local Plan, the Habitat Regulation Assessment (HRA) was prepared. The objective of the HRA is to identify any areas of the Hart Local Plan that are likely to have a significant effect on Natura 2000 or European Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar Sites and it devises appropriate mitigation strategies where such effects are identified. Much of Hart lies within

[7] https://www.gov.uk/government/publications/national-planning-policy-framework--2

[8] https://www.gov.uk/guidance/air-quality--3

five kilometres of the Thames Basin Heaths Special Protection Area (TBHSPA) and it is therefore relevant to consider these issues.

The HRA confirms that the recreational impacts of proposed development on European sites can be avoided or mitigated. It also confirms that air quality is not likely to cause a significant effect on the SPA. Increased nitrogen deposition has the potential to result in earth land habitat change and loss of species diversity which could adversely affect the TBHSPA. The Council is committed to working with partners to monitor roadside air quality that may affect the Thames Basin Heaths SPA.

2.2.3 Developer contributions towards transport improvements including sustainable transport

The Council secures developer contributions for transport improvements on behalf of Hampshire County Council (see Hart's Community Infrastructure Policy and Hampshire County Council's Transport Contributions Policy). These contributions go towards the implementation of the North Hampshire Transport Strategy, Fleet Town Access Plan and other schemes for which there is an up to date evidence base. These include measures to promote sustainable transport or alleviate traffic congestion. Hampshire County Council control the spending of transport contributions.

2.2.4 Community Infrastructure Levy

The Council decided to introduce a Community Infrastructure Levy (CIL) in Hart following the adoption of the Hart Local Plan 2032. CIL funds can potentially be used to improve sustainable transport in the area helping achieve air quality objectives. More recently the Government has indicated, through the Levelling Up and Regeneration Bill, that local authorities must introduce an 'Infrastructure Levy' – similar to CIL but to be calculated and operated differently. The Council is currently considering whether to progress CIL in light of this proposal.

2.2.5 Local Transport Plans and strategies

The following documents are prepared by Hampshire County Council and aim to promote sustainable travel and reduce congestion:

- Hampshire Local Transport Plan 2011-2031
- Hampshire Local Transport Plan – Part B Three Year Implementation Strategy 2014-2017

- Hart District Transport Statement, 2013
- Hart Transport Statement Live Scheme List, December 2013
- Walking Strategy, 2016
- Cycling Strategy, 2015
- Fleet Town Access Plan 2011-2031

Local Cycling and Walking Infrastructure Plan (LCWIP)

Hart District Council is commissioning an LCWIP with the aim of improving infrastructure for cycling and walking to promote a shift away from private cars into active travel. In Hart this is part of a broader Green Grid Strategy.

Hart District Council worked to implement these measures in partnership with the following stakeholders during 2021:

- Planning Policy Team
- Place Services
- Environmental Health Team.

Table 2.1 – Progress on Measures to Improve Air Quality

Measure No.	Measure	Category	Classification	Year Measure Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
1	Planning policies and Local Transport Plans in place to help protect air quality	Policy Guidance and Development Control	Other policy	Local Plan Policy NBE11 Pollution adopted April 2020 Hampshire Local Transport Plan 2011-2031 adopted 2011	Policy already in place	Local Authority	Local Authority					Not quantifiable	Number of planning applications where air quality has been screened/assessed		Hampshire County Council are preparing a new Local Transport Plan – LTP4. Consultation closed 24 June 2022. LTP4 represents a strong move towards prioritising environmental issues and places people including healthy environments and tackling air pollution.
2	Installation of an electric vehicle charging point	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging		August 2016	Local Authority	Local Authority				August 2016	Not quantifiable	Use of the charging point	Implementation on-going	
3	Hart's Green Grid - Encourage modal shift to more sustainable transport options	Promoting Travel Alternatives	Promotion of cycling and walking / Public transport improvements-interchanges stations and services	2021	2021 / 2022	Local Authority			Initial consultation already funded)		On-going	Not quantifiable		The results of the January 2021 workshop and the survey will inform the Green Grid strategy. We will publish the draft strategy and undertake additional consultation (likely to be Autumn/Winter 2021)	https://www.hart.gov.uk/harts-green-grid Also an objective under Hart Councils Climate Action Plan 2020 - 2023
4	Offsetting projects	Other - Planting wild gardens, urban trees, living walls in car parks, green/living roofs	Other	2020	Oct 2020	Local Authority			Staff costs		Ongoing			Creation of plan showing cost, air pollution and carbon reduction, submitted for consideration as a pilot project once suitable site found	Objective under Hart Councils Climate Action Plan 2020 - 2023
5	Transition Hart DC fleet vehicles to ultra-low / low emission vehicles	Vehicle Fleet Efficiency	Fleet efficiency and recognition schemes	2020		Local Authority					Ongoing	Not quantifiable		Produce a costed proposal covering investment need of both infrastructure and vehicles to introduce zero emission vehicles to HDC fleet. Looking at both associated carbon emission saving and air pollution improvements	Objective under Hart Councils Climate Action Plan 2020 - 2023

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

As detailed in Policy Guidance LAQM.PG16 (Chapter 7), local authorities are expected to work towards reducing emissions and/or concentrations of $PM_{2.5}$ (particulate matter with an aerodynamic diameter of 2.5µm or less). There is clear evidence that $PM_{2.5}$ has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases.

There are currently no automatic $PM_{2.5}$ monitoring stations within Hart District Council, nor PM_{10} monitoring. As recommended, in the absence of $PM_{2.5}$ monitoring and where a local authority does not undertake PM_{10} monitoring, the current Defra background mapping resource should be used to provide maximum background annual mean $PM_{2.5}$ concentrations. The current Defra 2018 background maps[9] for Hart District Council provide background concentrations of $PM_{2.5}$. The highest concentration is predicted to be 10.2 µg/m^3 within the 1 x 1km grid square with the centroid grid reference of 484500, 160500 for the year 2021. This indicates that $PM_{2.5}$ concentrations is slightly above the proposed annual average limit value for $PM_{2.5}$ target of 10µg/m^3 to be met across England by 2040. This is an area in Blackwater that encompasses a stretch of the A30 and B3272. The Blackwater train station is in this location but is mainly compromised of residential and commercial properties.

2.3.1 Smoke Control Areas and Guidance on Domestic Fires and Wood Burning

Although there are no smoke control areas in Hart District Council, the council do encourage good practice is met when using open fires and wood-burning appliances. Open fires and wood-burning appliances can be a source of air pollution. The public can help reduce poor air quality when using these appliances by:

- Regularly maintaining and servicing your stove
- Regularly sweep chimneys
- Burn seasoned wood (including Ready to Burn)

[9] https://uk-air.defra.gov.uk/data/laqm-background-maps?year=2018

- Not burning treated waste wood or household rubbish
- Consider purchasing a stove that has been approved for use in smoke control areas by Defra or Ecodesign Ready stove
- Check whether you live in a Smoke Controlled Area

More information (including Smoke Control Areas legislation) can be found at the following links:

- DEFRA Open fires and wood burning stoves (A practical guide)
- https://woodsure.co.uk/are-you-ready-to-burn/
- https://smokecontrol.defra.gov.uk/fuels.php
- https://smokecontrol.defra.gov.uk/appliances.php
- https://burnright.co.uk/

2.3.2 Domestic Heating and Air Pollution

Heating systems for homes and other buildings can be a source of air pollution, for example the combustion of fuels (e.g. coal, gas or wood) result in emissions of pollutants to air. The emissions to air from domestic heating can be reduced by:

- Insulating your home efficiently and be energy efficient
- Use electric heating powered by non-combustion forms of renewable energy

More information on this and links to other resources are available at http://www.hart.gov.uk/pollution-nuisance and https://uk-air.defra.gov.uk/.

2.3.3 Environmental Permitting Regulations (EPR)

Local Authorities administer some of the EPR permit types whilst others, such as waste carrier licenses, are issued by the Environment Agency. More information on the issuing body is available by clicking on the Environment Agency link for environmental permitting information.

Industrial processes that pollute the atmosphere are controlled by the Council or the Environment Agency. Here you can find a register of processes authorised by the Council which is kept by the Environmental Health Department. You can also view the register at the Council Offices at Civic Offices, Harlington Way, Fleet during normal office hours (currently 09:00-16:00).

You must have an environmental permit if you operate a regulated facility in England or Wales. You can find out more and apply for a permit on GOV.UK's website. You can also tell us about a change in your existing circumstances.

For more information on Hart District Council's EPR processes, including air quality, contaminated land and noise, please visit Hart District Council's Environment page.

2.3.4 Building Regulations Part S

The Regulation that became operational on 15th June 2022 provides a requirement for new homes and existing homes undergoing large renovations (of 10 more or dwellings) to have facilities for charging electric vehicles at home that may be parked on associated parking spaces at that home. Although a transition period is included where applications made prior to this date have a year before it becomes a requirement in June 2023.

The document applies to the following projects:

- New residential and non-residential buildings
- Buildings undergoing a material change of use to dwellings, such as converting a barn into a home
- Residential and non-residential buildings undergoing a major renovation where 10 or more dwelling are being created
- Mixed-use buildings that are either new or undergoing a major renovation.

All new build homes must have electric vehicle charging facilities for each associated parking space that is equal to the total number of dwellings.

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

This section sets out the monitoring undertaken within 2021 by Hart District Council and how it compares with the relevant air quality objectives. In addition, monitoring results are presented for a five-year period between 2017 and 2021 to allow monitoring trends to be identified and discussed.

Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

Hart District Council do not currently conduct continuous automatic monitoring within the district. Continuous monitoring was previously conducted in Blackwater; monitoring at this site was discontinued in March 2014 with a withdrawal of funding.

3.1.2 Non-Automatic Monitoring Sites

Hart District Council undertook non- automatic (i.e. passive) monitoring of NO_2 at 13 sites during 2021. Table A.1 in Appendix A presents the details of the non-automatic sites.

Maps showing the location of the monitoring sites are provided in Appendix D. Further details on Quality Assurance/Quality Control (QA/QC) for the diffusion tubes, including bias adjustments and any other adjustments applied (e.g. annualisation and/or distance correction), are included in Appendix C.

Individual Pollutants

The air quality monitoring results presented in this section are, where relevant, adjusted for bias, annualisation (where the annual mean data capture is below 75% and greater than 25%), and distance correction. Further details on adjustments are provided in Appendix C.

3.1.3 Nitrogen Dioxide (NO_2)

Table A.1 and Table A.2 in Appendix A compare the ratified and adjusted monitored NO_2 annual mean concentrations for the past five years with the air quality objective of

40µg/m^3. Note that the concentration data presented represents the concentration at the location of the monitoring site, following the application of bias adjustment and annualisation, as required (i.e. the values are exclusive of any consideration to fall-off with distance adjustment).

For diffusion tubes, the full 2021 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 of the 40 µg/m^3 NO_2 annual mean objective have been reported during the last five years. A chart showing the trends at each measurement site over the last five years is presented in Figure A.1. Generally, the concentrations of NO_2 have reduced at all sites over the last five years with the exception of 2021 as concentrations increased slightly compared to 2020. This is likely due to the easing of COVID-19 lockdown restrictions as 2021 concentrations still remain below 2019 levels.

The annual mean NO_2 concentrations did not exceed 60 µg.m^{-3} at any monitoring locations, which indicates that an exceedance of the 1-hour mean objective (200 µg/m^3) is unlikely at these sites.

4 Planning Applications

A review of 2021 planning applications identified no new or proposed developments where air quality was considered likely to be a concern by Hart District Council. Table 4.1 below contains a selection of planning applications considered in 2021.

Table 4.1 Hart District Council Planning Applications

Address	Proposal	Date of decision	Decision
Technology House, 1 Fleetwood Park, Barley Way, Fleet, GU51 2QX	Construction of two additional floors above existing building to create 35 new flats (net increase of 26) including associated changes to the external elevations to lower floors.	01-Apr-21	REF[10]
Police Station, 13 Crookham Road, Fleet, Hampshire, GU51 5QQ	Demolition of existing building and redevelopment of the site to form 31 retirement apartments including communal facilities, retention of existing access, car parking and landscaping	14-May-21	NONDET[11]
Land East Of Hook Road, North Warnborough, Hook, Hampshire	Construction of 17 dwellings (4 x two bed, 7 x three bed, 4 x four bed and 2 x five bed), access, landscaping, boundary treatments and associated infrastructure (Basingstoke Canal - Geotechnical Report received)	01-Jun-21	REF[10]

[10] REF – Refused

[11] NONDET - Non-determination

Burford, West Street, Odiham, Hook, RG29 1NX	Construction of 16 no. dwellings (8 x 2-bedroom, 6 x 3-bedroom and 2 x 4-bedroom) with associated access, landscaping, and parking (following the demolition of existing dwelling house).	10-Jun-21	PER[12]
Land Off Holt Lane, Hook, Hampshire	Erection of a new veterinary practice (including ancillary overnight accommodation)	14-Jul-21	PER[12]
Yateley Hall, Firgrove Road, Yateley, GU46 6HJ	Change of use from an office (Land Use Class E- formerly B1a) to a school (Land Use Class F1- formerly D1), cycle storage and associated re-arrangement of car parking spaces.	12-Aug-21	PER[12]
The Bell Inn, 36 Frogmore Road, Blackwater, Camberley, GU17 0NP	Construction of a 21 bed dementia care home with associated highways works, parking and landscaping (following demolition of public house and other buildings).	10-Sep-21	PER[12]
Land At Elvetham Bridge, Fleet Road, Fleet, Hampshire	Demolition of the existing buildings and erection of a 65 bed care home with associated back of house, parking, landscaping, associated development and amendments to site access.	22-Sep-21	WDN[13]
Land North Of Netherhouse Copse, Hitches Lane, Fleet, Hampshire	Reserved matters application seeking the approval of access, appearance, layout and scale of 39 residential dwellings pursuant to 16/01651/OUT	11-Oct-21	PER[12]
Land East Of Reading Road, Hook, Hampshire	Erection of a 72 bedroom care home (Use Class C2) with associated access, parking, landscaping and site infrastructure	14-Oct-21	REF[10]

[12] PER – Permitted

[13] WDN – Withdrawn

Owens Farm, Newnham Road, Hook, Hampshire, RG27 9NG	Hybrid application for a) Outline development (with matters except access reserved) for a retirement care living development comprising up to 160 units (C2 use) and local community facilities, pedestrian and vehicular access, parking areas and landscaping	14-Oct-21	REF[10]
Chosley Farm, Bidden Road, North Warnborough, Hook, Hampshire, RG29 1BW	Construction of a Solar Photovoltaic Farm with an output capacity not to exceed 49.9MW of energy, with associated battery storage and supporting infrastructure including inverters and a transformer, fencing, CCTV installation and landscaping works	11-Nov-21	PER[12]
Bunkers Hill Farm, Reading Road, Rotherwick, Hook, Hampshire, RG27 9DA	Construction of solar farm and battery stations together with all associated works, equipment and necessary infrastructure.	11-Nov-21	PER[12]
Land Between Moulsham Lane And Broome Close, Yateley, Hampshire	Variation of Condition 2 attached to Planning Permission 17/02793/REM dated 05/04/2018 to allow the relocation of the proposed SANG car park (Revised landscaping details received)	19-Nov-21	PER[12]
Land On The East Side Of Beacon Hill Road, Ewshot, Farnham, GU52 8DY	Removal of Condition 14 attached to Planning Permission 16/00564/OUT dated 16/05/2018 which limits the total amount of B8 floorspace to a maximum of 3,031.50 sqm or 65% of the total floorspace to be provided at the site whichever is the lesser	10-Feb-22	REF[10]
Land Adjacent To, Reading Road, Hook, Hampshire	Erection of 20 affordable dwellings on an entry-level exception site with vehicular access from Reading Road alongside landscaping, public open space, internal roads, parking and associated drainage infrastructure	14-Feb-22	REF[10]
Motoright, Village Way, Yateley, Hampshire, GU46 7SE	Construction of a part two part three storey building to accommodate 22 no. sheltered apartments, communal facilities, a guest suite, access, car parking and landscaping following the demolition of Gayton House and Village Service Station	01-Mar-22	REF[10]

Appendix A: Monitoring Results

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

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
OD1	Clover Leaf, Odiham	Roadside	473651	151085	NO_2	No	50 m	4 m	No	1.5 - 2.0
HW2	The Phoenix, Hartley, Wintney	Kerbside	475884	155818	NO_2	No	30 m	2 m	No	1.5 - 2.0
HO2	Dorchester Arms, Hook	Kerbside	471382	153407	NO_2	No	16 m	2 m	No	1.5 - 2.0
M3EH	Elvetham Heath, Fleet	Kerbside	480290	155899	NO_2	No	10 m	15 m (M3)	No	1.5 - 2.0
M31	M3 Northbound	Roadside	479920	156030	NO_2	No	100 m	2 m	No	1.5 - 2.0
BL1	Vicarage Road, Blackwater	Kerbside	485114	159809	NO_2	No	3 m	3 m	No	1.5 - 2.0
BL (AQ 1)	Blackwater (AQM 1)	Roadside	485251	159813	NO_2	No	22 m	4 m	No	1.5 - 2.0
BL (AQ 2)	Blackwater (AQM 2)	Roadside	485251	159813	NO_2	No	22 m	4 m	No	1.5 - 2.0
HS1	High Street, Fleet	Roadside	480592	153870	NO_2	No	22 m	2 m	No	1.5 - 2.0
HO3	Hook	Kerbside	472469	154254	NO_2	No	6 m	1.5 m	No	2.0
HW3	Hartley Wintney	Roadside	476684	156850	NO_2	No	16 m	1 m	No	2.0
FL3	Fleet	Roadside	481161	154632	NO_2	No	22 m	1 m	No	2.0
YA2	Yateley	Roadside	481723	161015	NO_2	No	5 m	1.5 m	No	2.0

Notes:

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

(2) N/A if not applicable.

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

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2021 (%) [2]	2017	2018	2019	2020	2021
OD1	473651	151085	Roadside	100	100	15.8	16.9	16.1	11.0	13.1
HW2	475884	155818	Kerbside	100	100	31.9	31.1	28.4	18.4	21.0
HO2	471382	153407	Kerbside	100	100	31.9	32.1	26.5	19.9	21.5
M3EH	480290	155899	Kerbside	100	100	21.3	23.2	20.8	14.3	16.4
M31	479920	156030	Roadside	100	100	26.0	28.0	25.7	16.3	16.8
BL1	485114	159809	Kerbside	100	100	30.9	30.0	28.1	19.9	21.8
BL (AQ 1), BL (AQ 2)	485251	159813	Roadside	100	100	27.3	27.5	22.5	16.4	18.9
HS1	480592	153870	Roadside	100	100	25.6	27.3	24.8	16.1	19.9
HO3	472469	154254	Kerbside	100	100	-	30.1	29.0	19.8	21.3
HW3	476684	156850	Roadside	100	100	-	26.0	24.3	15.5	17.3
FL3	481161	154632	Roadside	100	100	-	30.3	27.5	17.8	20.0
YA2	481723	161015	Roadside	100	100	-	27.9	28.5	18.7	20.7

☒ **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.TG16 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

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

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

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

Figure A.1 – Trends in Annual Mean NO_2 Concentrations

Appendix B: Full Monthly Diffusion Tube Results for 2021

Table B.1 – NO_2 2021 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 (0.84)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
OD1	473651	151085	11.5	20.3	16.8	17.8	13.0	16.2	12.7	15.3	15.8	14.9	17.1	15.5	15.6	13.1		
HW2	475884	155818	25.9	25.1	25.6	23.2	19.5	23.1	23.8	22.3	28.6	28.4	30.5	24.6	25.0	21.0		
HO2	471382	153407	25.8	25.2	26.6	27.8	22.5	23.6	22.4	22.4	24.0	28.0	32.0	26.2	25.5	21.5		
M3EH	480290	155899	20.7	28.6	23.0	23.4	15.0	16.9	18.3	18.7	15.7	16.2	20.8	17.4	19.6	16.4		
M31	479920	156030	18.9	23.6	17.2	19.3	22.1	17.5	18.7	18.8	21.7	22.0	18.0	22.2	20.0	16.8		
BL1	485114	159809	24.1	31.4	26.4	30.4	23.6	20.9	23.9	22.6	19.8	29.1	30.7	28.3	25.9	21.8		
BL (AQ 1)	485251	159813	25.9	23.0	25.3	27.9	18.5	20.6	20.7	20.2	20.3	21.1	26.3	21.8	-	-		Duplicate Site with BL (AQ 1) and BL (AQ 2) - Annual data provided for BL (AQ 2) only
BL (AQ 2)	485251	159813	25.3	24.8	25.6	26.3	17.5	18.8	18.9	19.4	21.7	21.1	27.9	21.8	22.5	18.9		Duplicate Site with BL (AQ 1) and BL (AQ 2) - Annual data provided for BL (AQ 2) only
HS1	480592	153870	20.5	26.8	23.2	29.5	20.3	21.1	22.3	21.0	24.2	27.2	24.6	24.1	23.7	19.9		
HO3	472469	154254	25.4	27.8	25.6	30.1	22.5	23.7	24.6	22.7	23.1	25.0	28.7	24.7	25.3	21.3		
HW3	476684	156850	16.1	23.0	19.3	23.2	19.5	16.2	19.8	19.2	23.8	23.6	20.7	23.2	20.6	17.3		
FL3	481161	154632	20.3	26.7	24.5	28.4	22.7	23.6	19.8	21.1	23.7	24.5	25.6	24.3	23.8	20.0		
YA2	481723	161015	26.5	28.9	24.7	28.8	21.1	20.1	21.8	20.1	25.5	25.2	29.4	23.9	24.7	20.7		

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

☒ **National bias adjustment factor used**

☒ **Hart District Council confirm that all 2021 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 Hart District Council During 2021

Hart District Council has not identified any new sources relating to air quality within the reporting year of 2021. However, there is currently an outline planning application at Owens Farm for a retirement care living development comprising up to 160 units (C2 use) and local community facilities, pedestrian and vehicular access, parking areas and landscaping which may have an impact on air quality in the future.

Additional Air Quality Works Undertaken by Within Hart District Council During 2021

Hart District Council has not completed any additional works within the reporting year of 2021.

QA/QC of Diffusion Tube Monitoring

Hart District Council's non automatic monitoring has been completed in adherence with the 2021 Diffusion Tube Monitoring Calendar[14].

The diffusion tubes deployed by Hart District Council are supplied and analysed by Gradko using a preparation mixture of 20% triethanolamine (TEA) in water. The bias adjustment factor of 0.84 reported in the national database of 32 different co-location studies[15], conducted using diffusion tubes prepared and analysed by Gradko during 2021, has been used to adjust the diffusion tube results.

[14] https://laqm.defra.gov.uk/air-quality/air-quality-assessment/diffusion-tube-monitoring-calendar/

[15] National Diffusion Tube Bias Adjustment Factor Spreadsheet Version 03/21 (available from https://laqm.defra.gov.uk/bias-adjustment-factors/national-bias.html

Gradko have participated in HSL and LGC Standards AIR-PT scheme, which is a UKAS accredited, independent proficiency testing scheme comparing laboratories undertaking the analysis of air quality monitoring (https://laqm.defra.gov.uk/diffusion-tubes/qa-qc-framework.html).

In the 2020 AIR-PT results, Gradko scored 75% in AIR-PT AR036 (January to February 2020)[16]. No results were reported for AIR-PT AR037 (May – June 2020) and AIR-PT AR039 (July – August 2020), however AIR-PT AR040 (September – October 2020) scored 75%. The percentage score reflects the results deemed to be satisfactory based upon the z-score of < ±2.

Diffusion Tube Annualisation

All diffusion tube monitoring locations within Hart District Council recorded data capture above 75% therefore it was not required to annualise any monitoring data.

Diffusion Tube Bias Adjustment Factors

The diffusion tube data presented within the 2022 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.TG16 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.

Hart District Council have applied a national bias adjustment factor of 0.84 to the 2021 monitoring data. A summary of bias adjustment factors used by Hart District Council over the past five years is presented in Table C.1. A national bias adjustment factor was used for the 2021 ASR as no automatic monitoring is carried out within Hart District Council to generate a local bias factor.

[16] Available at: https://laqm.defra.gov.uk/documents/LAQM%20NO2%20Performance%20data_Up%20to%20March%202021_v2.pdf

Table C.1 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2021	National	03/22	0.84
2020	National	03/21	0.81
2019	National	03/20	0.93
2018	National	03/19	0.93
2017	National	03/18	0.89

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 Hart District Council required distance correction during 2021.

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

Figure D.1 – Diffusion tube location – Clover Leaf, Odiham (OD1)

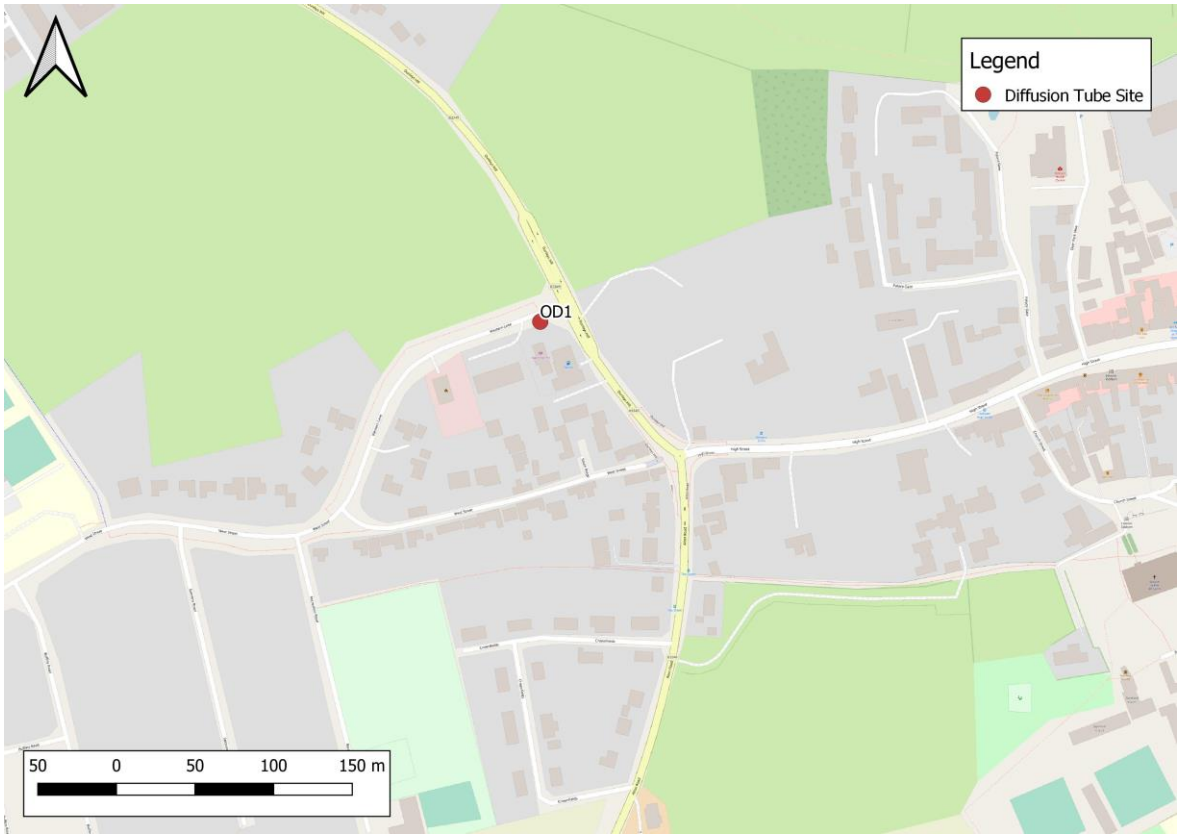

Figure D.2 – Diffusion tube location – The Phoenix, Hartley, Wintney (HW2)

Figure D.3 – Diffusion tube location – Dorchester Arms, Hook (HO2)

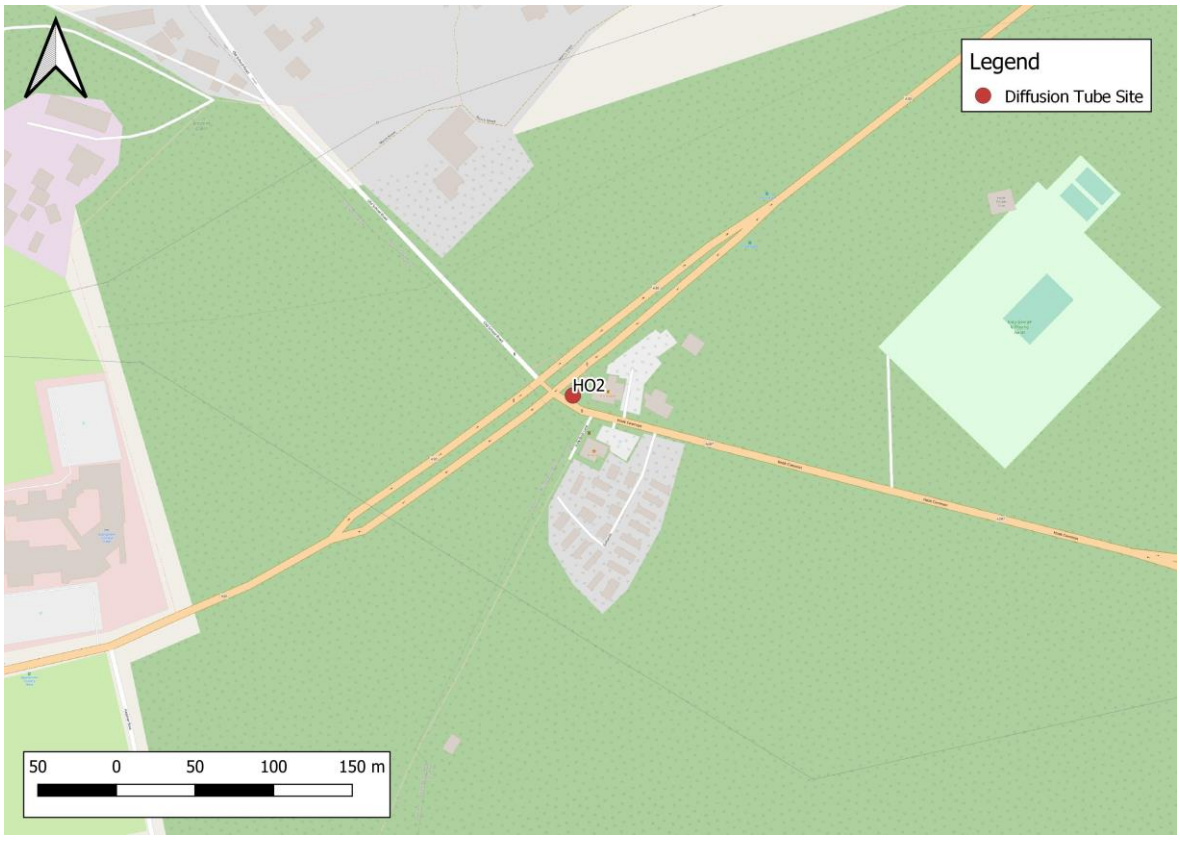

Figure D.4 – Diffusion tube location – Elvetham Heath, Fleet (M3EH)

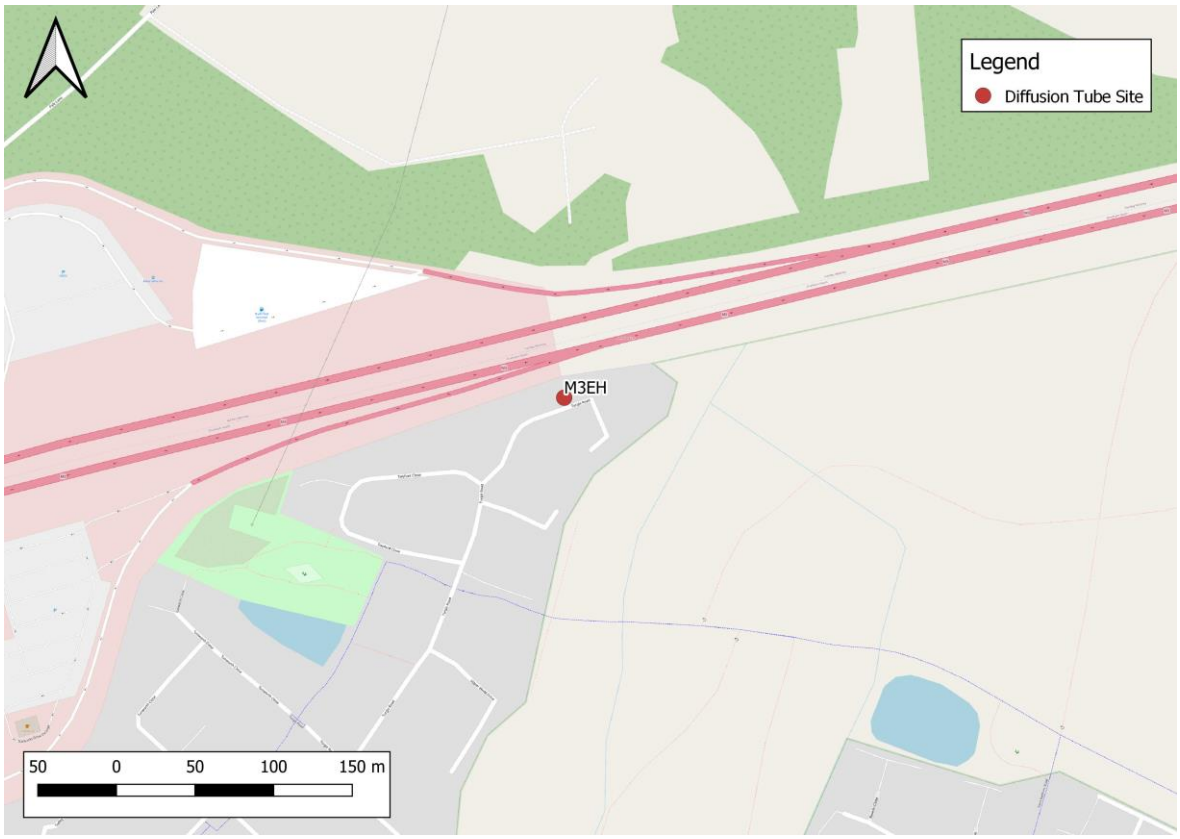

Figure D.5 – Diffusion tube location – M3 Northbound (M31)

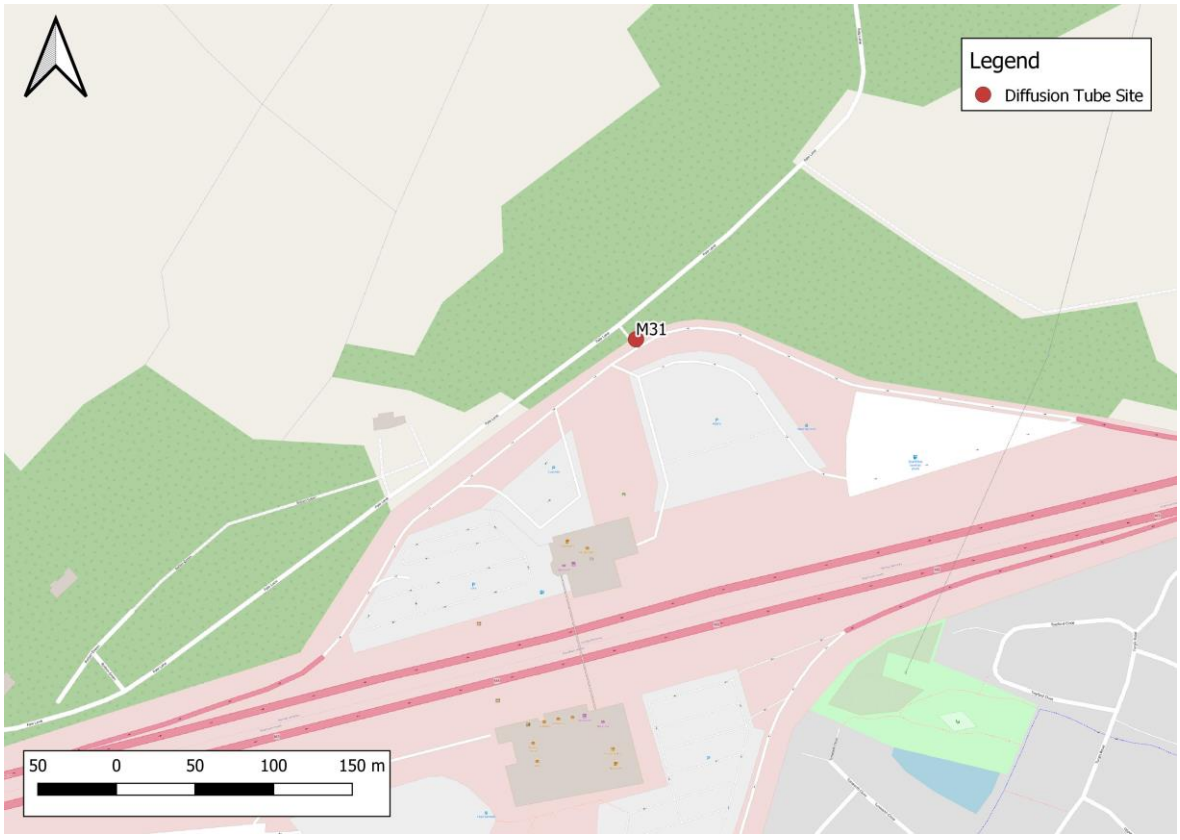

Figure D.6 – Diffusion tube location – Vicarage Road, Blackwater (BL1)

Figure D.7 – Diffusion tube location – Blackwater (AQM 1) (BL(AQ 1))

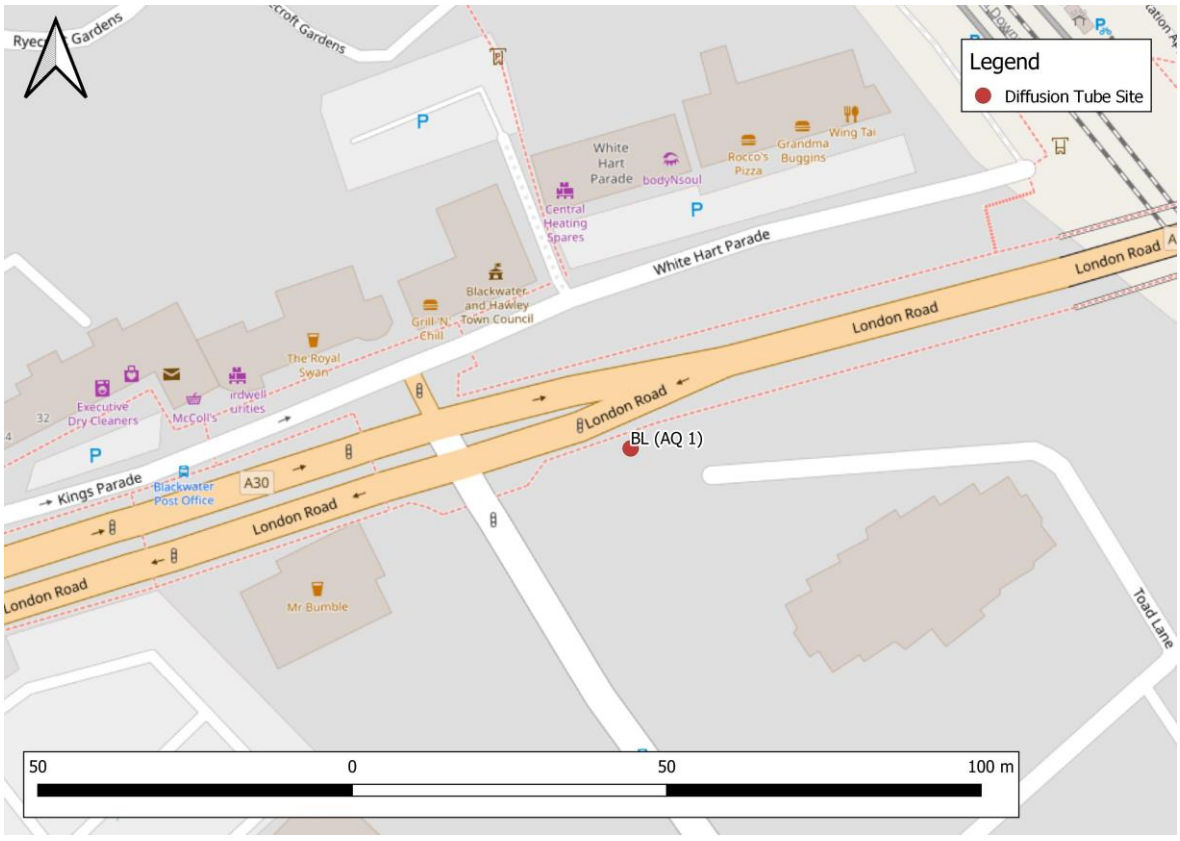

Figure D.8 – Diffusion tube location – Blackwater (AQM 2) (BL(AQ 2))

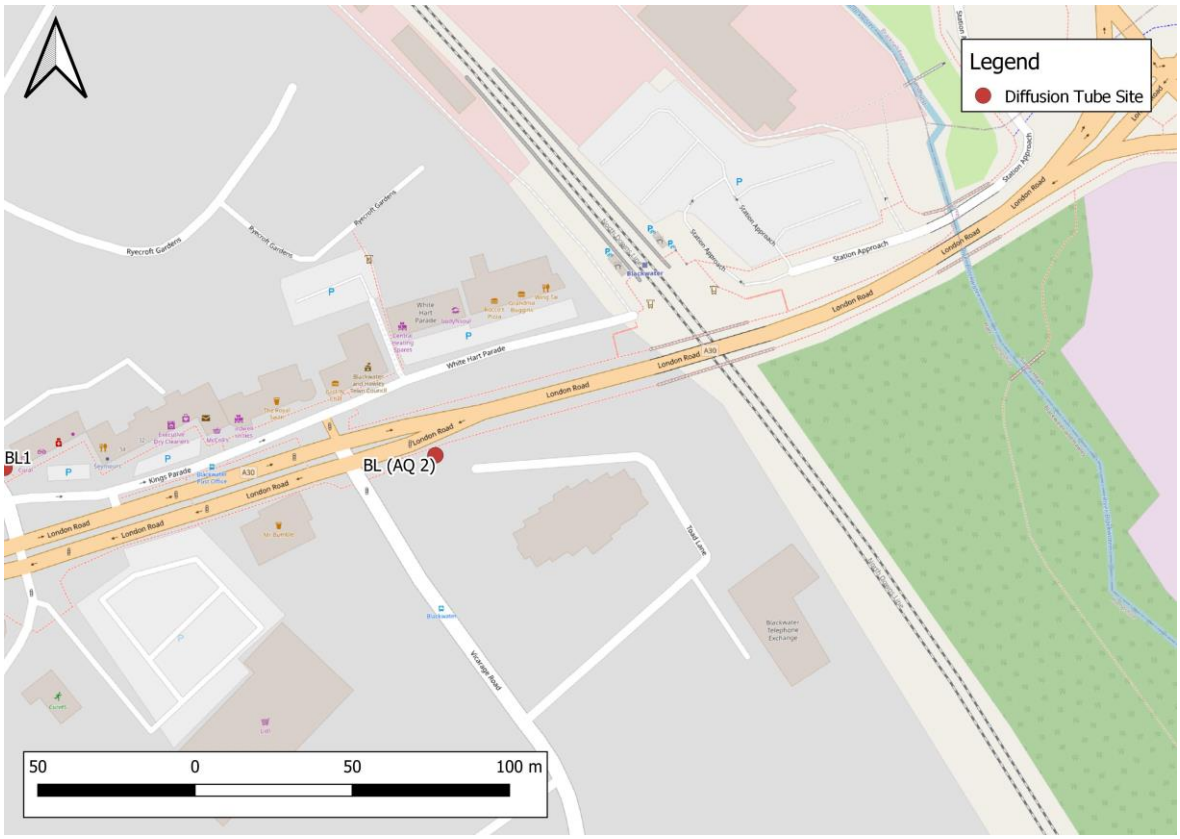

Figure D.9 – Diffusion tube location – High Street, Fleet (HS1)

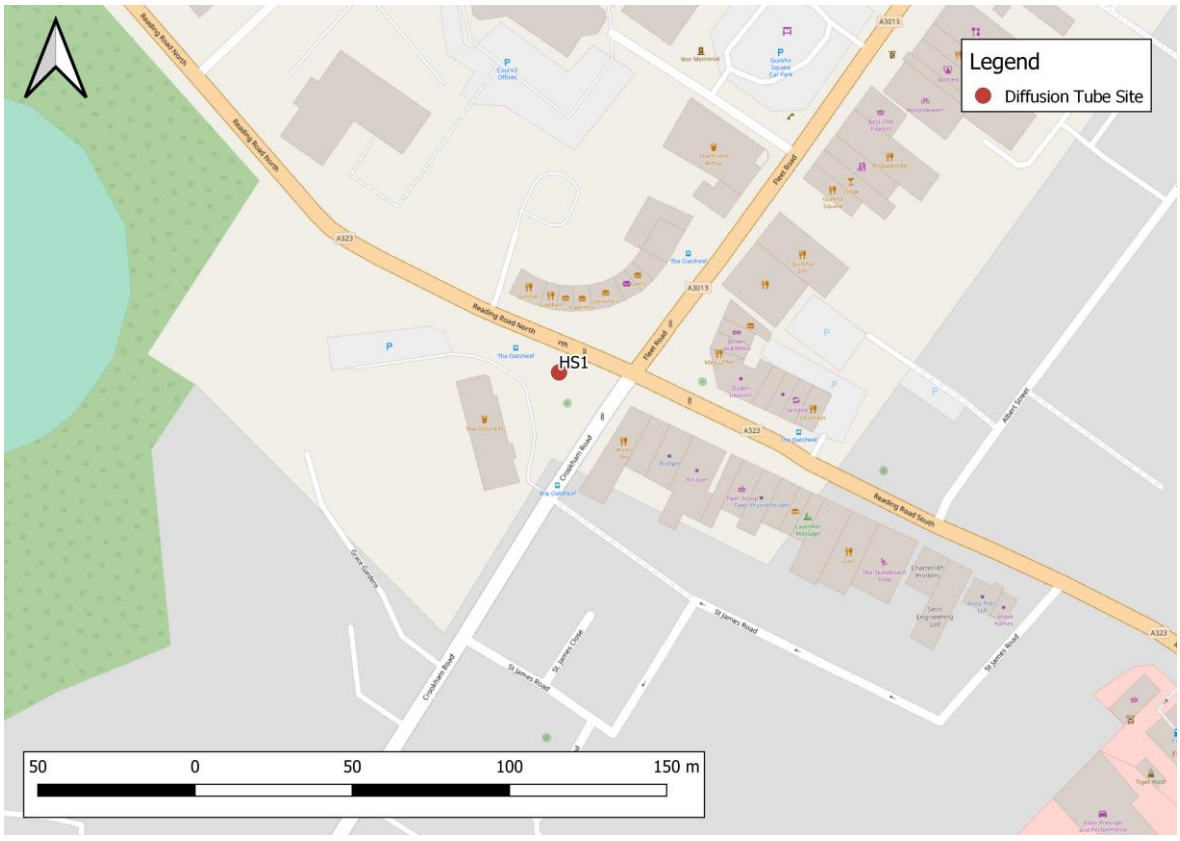

Figure D.10 – Diffusion tube location – Hook (HO3)

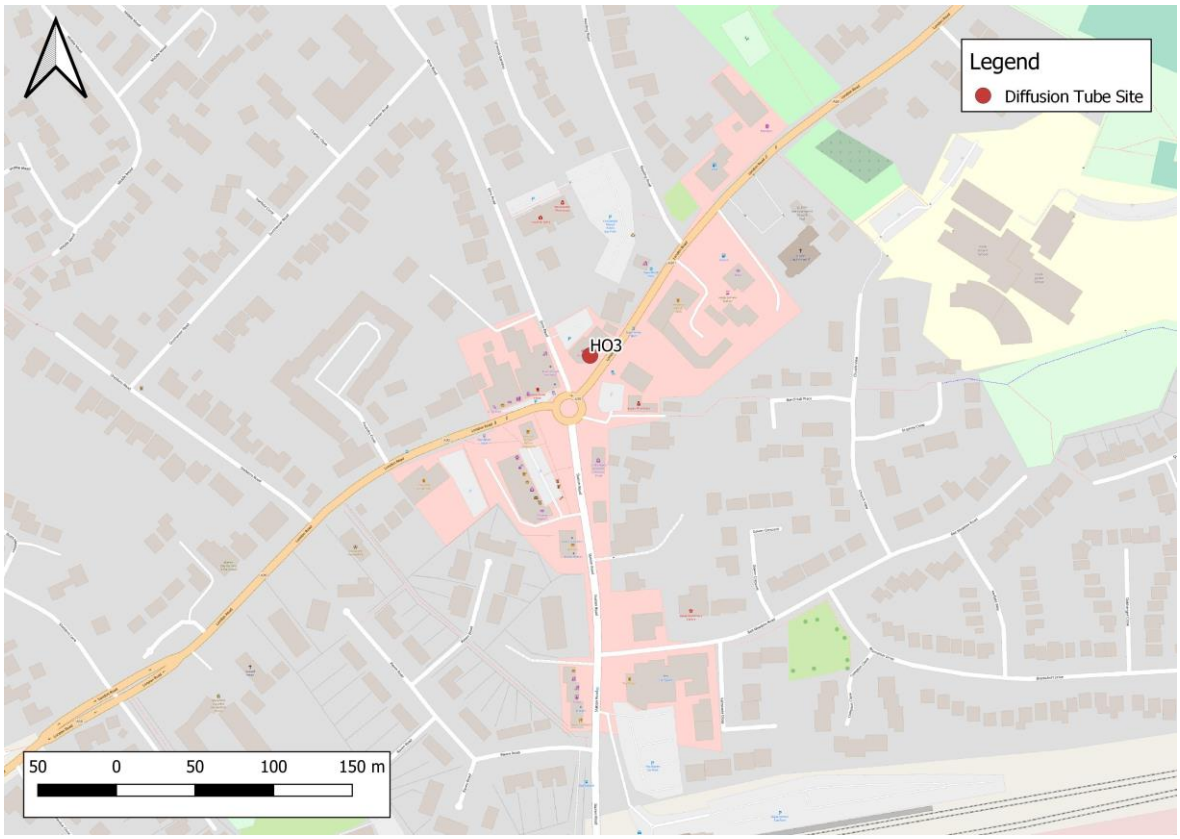

Figure D.11 – Diffusion tube location – Hartley Wintney (HW3)

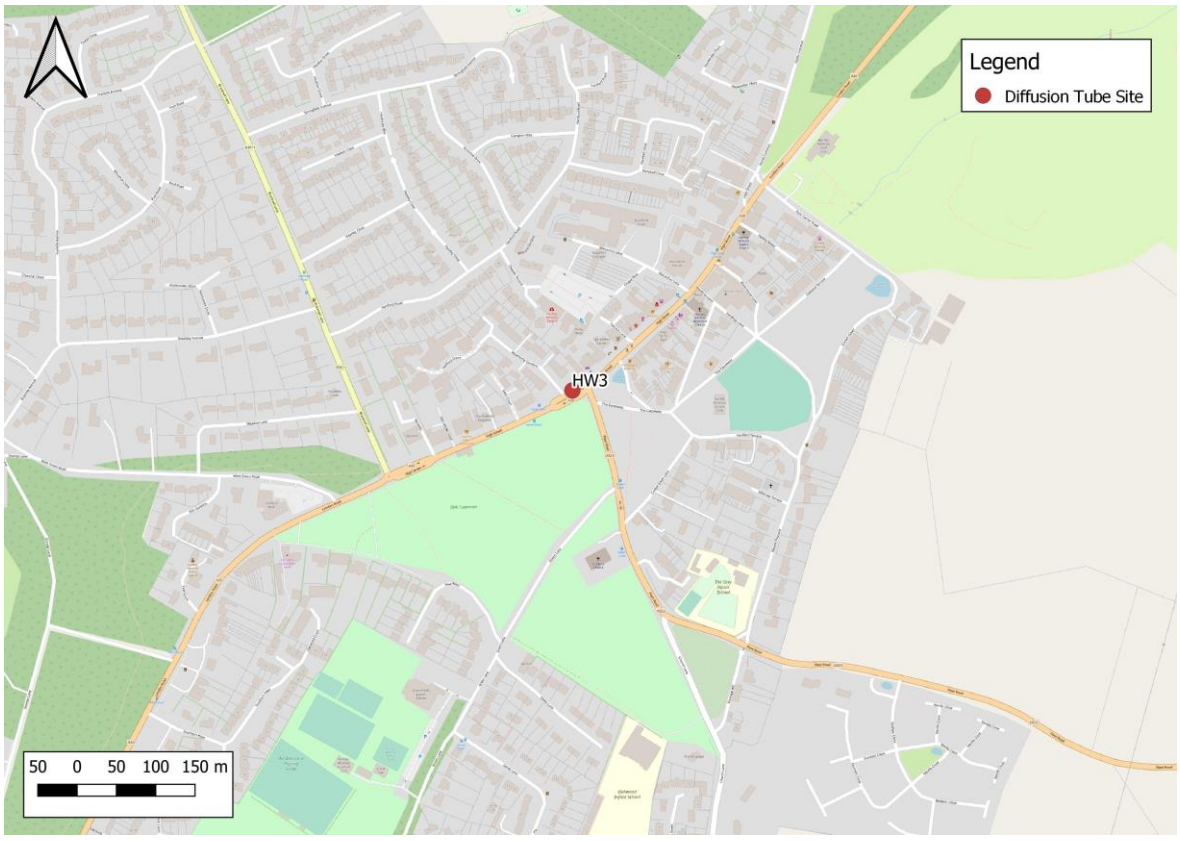

Figure D.12 – Diffusion tube location – Fleet (FL3)

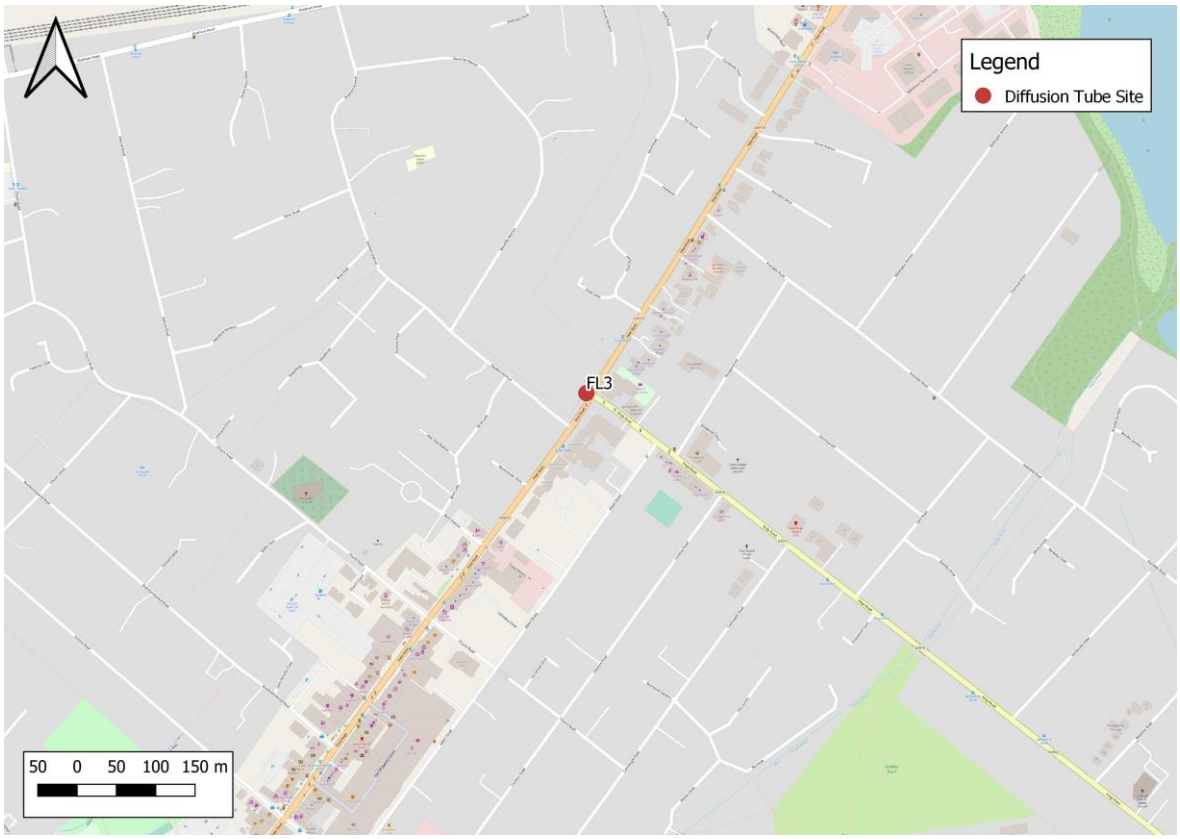

Figure D.13 – Diffusion tube location – Yateley (YA2)

Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England[17]

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

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

Glossary of Terms

Abbreviation	Description
AQAP	Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the local authority intends to achieve air quality limit values'
AQMA	Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives
ASR	Annual Status Report
Defra	Department for Environment, Food and Rural Affairs
DMRB	Design Manual for Roads and Bridges – Air quality screening tool produced by National Highways
EU	European Union
FDMS	Filter Dynamics Measurement System
LAQM	Local Air Quality Management
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides
PM_{10}	Airborne particulate matter with an aerodynamic diameter of 10µm or less
$PM_{2.5}$	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less
QA/QC	Quality Assurance and Quality Control
SO_2	Sulphur Dioxide

References

- Local Air Quality Management Technical Guidance LAQM.TG16. April 2021. 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.PG16. May 2016. Published by Defra in partnership with the Scottish Government, Welsh Assembly Government and Department of the Environment Northern Ireland.
- DEFRA (2022) National Diffusion Tube Bias Adjustment Factor Spreadsheet v.03/22
- DEFRA (2018) Background Mapping for Local Authorities
- Hart District Council (2021). Annual Status Report.
- Public Health England, Health Matters: air pollution Guidance, June 2021
- Hart Local Plan, Strategy and Sites 2032, April 2020, available at ; https://www.hart.gov.uk/sites/default/files/4_The_Council/Policies_and_published_documents/Planning_policy/Hart%20LPS%26S.pdf