

**Surrey Heath Borough Council**  
**Performance and Finance Scrutiny Committee**  
**25 January 2023**

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**Air Quality Review 2022**

**Strategic Director:** Nick Steevens, Strategic Director: Environment & Community  
**Report Author:** James Robinson, Senior Environmental Health Officer  
**Key Decision:** No  
**Wards Affected:** All

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**Summary and purpose**

To provide Members with information on air pollution levels across the Borough, including the 2022 Air Quality Annual Status Review report and reviews the Council's Local Air Quality Management Area work.

**Recommendation**

The Performance and Finance Scrutiny Committee is advised to RESOLVE that the contents of the report be noted together with the 2022 Air Quality Annual Status Report and to note the work of the Council has undertaken under its Local Air Quality Management statutory duties

**1. Background and Supporting Information**

- 1.1 Under Part IV of the Environment Act 1995 and associated Regulations, Local Authorities are statutorily required to periodically review and assess air quality in their areas and to report against health-based objectives for specified pollutants to Defra. Where it appears that the objectives will not be met, local authorities must declare an Air Quality Management Area (AQMA) and develop action plans in pursuit of those objectives.
- 1.2 An Air Quality Annual Status Report (ASR) for Surrey Heath Borough is produced and submitted to Defra as part of the Councils local air quality management responsibilities. Its purpose is to report on progress in the preceding calendar year in achieving reductions and compliance in concentration of emissions relating to relevant pollutants and to identify new or changing sources of emissions. The reports are also published on the Council's website.

**2022 Air Quality Annual Status Report (ASR).**

- 1.3 The 2022 ASR for Surrey Heath has been approved and accepted by Defra and may be viewed on the following page;  
<https://www.surreyheath.gov.uk/residents/environmental-services/noise-nuisance-pollution/air-quality>
- 1.4 The report outlines the adverse health impacts associated with air pollution, which include respiratory conditions, onset of heart disease and cancer and the particular

detrimental effects it has on the elderly, the young and those with existing health conditions.

- 1.5 The main air quality issues locally are identified as being associated with the emission of pollutants (nitrogen dioxide NO<sub>2</sub> and particulate matter smaller than 10 micrometres in size, PM<sub>10</sub>) from road traffic, in particular the M3 motorway. There are no other significant sources of local emissions, these pollutants often originating from outside of the Borough.
- 1.6 The report outlines the air quality modelling and monitoring that informs the assessment of local air quality locally.
- 1.7 The actions taken to address air quality concerns, including the declaration and subsequent extension of a section of the Borough along the M3 as an Air Quality Monitoring Area (AQMA) in 2002 are outlined. It is recognised that as the main source of local pollution is traffic emissions from the motorway and major trunk roads, over which the Council has no direct control, measures to undertake effective local reduction in traffic emission levels and the outstanding items in the Council's current Air Quality Action Plan are limited.
- 1.8 The report concludes that nitrogen NO<sub>2</sub> and PM<sub>10</sub> levels across the Borough in 2021 met the current health based statutory air quality objectives at places of relevant exposure i.e. locations where people would be exposed to pollutants over defined periods of time (see Annex 1). Based on the latest monitoring results it is intended to continue with the current level of monitoring and retain the existing AQMA, until a period of non-lockdown and motorway work has elapsed.

#### **Air Quality Objectives and local pollutants.**

- 1.9 There are national air quality objectives for seven pollutants (Appendix E of the ASR). Previous assessments of local air quality in Surrey Heath have enabled the Council to conclude that concentrations of carbon monoxide, benzene, 1-3 butadiene, lead, and sulphur dioxide are compliant with the relevant objectives, leaving just NO<sub>2</sub> and PM as pollutants to consider. These objectives are detailed in Table 1 below.

**Table 1 Air Quality Objectives for NO<sub>2</sub> and PM<sub>10</sub>.**

Pollutant	Air Quality Objective	
	Concentration	Measured as
Nitrogen Dioxide (NO <sub>2</sub> )	200 µg/m <sup>3</sup> not to be exceeded more than 18 times a year	1-hour mean
	40 µg/m <sup>3</sup>	Annual mean
Particulate Matter (PM <sub>10</sub> )	50 µg/m <sup>3</sup> , not to be exceeded more than 35 times a year	24-hour mean
	40 µg/m <sup>3</sup>	Annual mean

- 1.10 Levels of pollutants that residents are exposed to come from pollution generated not only within the Borough but also from 'background' levels blown in from outside the area. For oxides of nitrogen (NO<sub>x</sub>) up to around 25% of levels recorded at locations away from main roads can be from these background sources. The main source of NO<sub>2</sub> produced within the Borough is from road traffic exhaust fumes, accounting for about 80% of all NO<sub>x</sub> produced. However for particulate matter, up to 90% of levels in the Borough come from background sources, produced elsewhere. Even at the busiest road location only about a fifth of particles comes from road traffic (e.g.

carbon emissions from engines, particles of rubber/metal from engine wear/braking and road surface dust), other sources including the building trade/industry, and wind-blow dust, pollens and soil particles. This presents a particular challenge for the Council to impact and influence local levels.

- 1.11 Detailed modelling carried out by specialist consultants as part of a 2019 Surrey Air Alliance project confirmed the influence of road traffic on pollutant levels, with major trunk routes such as the M3 motorway and the A30, A322 and A325 being clearly demarcated with predicted higher levels above the national air quality objective along the road corridors and at major junctions. (The Surrey Air Alliance is an air quality officers group of all eleven districts and borough Councils across Surrey and Surrey County Council with representation from National Highways).

#### **Air Quality Management Area.**

- 1.12 In 2002, the Council designated an area of land adjacent to the M3 motorway an Air Quality Management Area (AQMA) for both short and long term levels of NO<sub>2</sub> and short term 24 hour PM<sub>10</sub>.
- 1.13 The AQMA comprises a twenty metre wide strip both sides of the edge of the M3 from the Frimley Road flyover to just north of the Ravenswood Roundabout A325. To seek compliance within this area, in 2005 an Air Quality Action Plan (AQAP) was produced.
- 1.14 Work towards the majority of the actions in the AQAP has been completed. That required to accomplish the remaining five actions is ongoing although progress with these has been limited because the main source of emissions within the AQMA - the M3 motorway traffic - is under the control of National Highways. Local measures that can be conducted to reduce traffic emission levels on the M3 are therefore limited.
- 1.15 At locations of relevant exposure within the AQMA there has been concentrations compliant with the objectives for the last three years. Whilst concentrations were compliant in 2021, there has been a lack of three years' 'normal' (i.e. without COVID-19) data collected since the motorway upgrade was completed. Whilst revocation for this AQMA is likely, it will be delayed until such time as sufficient data has been collected to progress this.

#### **Air Quality Monitoring in Surrey Heath and analysis of results.**

- 1.16 In 2021 the Council undertook non-automatic (passive) diffusion tube monitoring of NO<sub>2</sub> at fifty one locations around the Borough. The locations are detailed in the ASR at Appendix B Table A2 and shown on the maps in Appendix D Figures D1 and D2. Monthly results are used to calculate annual mean levels.
- 1.17 There is one continuous monitoring station in the Borough at Castle Road, Camberley adjacent to the M3 providing real time measurements of both NO<sub>2</sub> and PM<sub>10</sub> within the AQMA. (A continuous monitoring station is a generic term for a cabinet which can contain a number of different analysers depending on which pollutants are to be monitored. Results from continuous monitoring can generate not only short-term averages such as 15 minute, hourly or daily averages, but also annual averages).
- 1.18 A summary of the air quality monitoring results over the past eight years of the NO<sub>2</sub> diffusion tubes and thirteen from the continuous analyser is contained within this report (Chart 3 in paragraph 1.29 and Chart 1 Annex B). In 2021, the annual mean

NO<sub>2</sub> concentrations were below 40 µg/m<sup>3</sup> at all of the 51 diffusion tube monitoring locations. This correlates with the 2020 results, when also no exceedances were recorded. This includes sites SH16 and SH33 (both at Wood Road, Frimley), that were identified as potential areas for concern due to previous exceedances in 2019. The improvements to traffic flow on the M3 are likely to have been a major contributing factor in keeping NO<sub>2</sub> concentrations below the annual mean objective at these sites, alongside the reduction in traffic activity associated with COVID-19 restrictions.

- 1.19 Of the seventeen new sites introduced in 2020, mainly outside schools, none of the concentrations monitored were close to the annual mean NO<sub>2</sub> objective throughout 2021. There were no exceedances of the short term hourly mean objective anywhere in the Borough recorded during 2021, which is consistent with previous years' results.
- 1.20 The annual mean NO<sub>2</sub> concentration for the continuous monitoring location at Castle Road in 2021 was 30 µg/m<sup>3</sup>, which thus met the annual mean NO<sub>2</sub> objective. The 2021 result is lower than concentrations recorded in the previous three years. (see Chart 3). There were no occasions here where the hourly mean NO<sub>2</sub> was greater than the objective value of 200 µg/m<sup>3</sup>, and the site is therefore well within the 18 hours permitted per year.
- 1.21 The 2021 monitoring results (14 µg/m<sup>3</sup>) for PM<sub>10</sub> from the automatic monitoring station remain well within the relevant air quality objectives (40 µg/m<sup>3</sup>). This is a decrease in the concentration from that in 2020 (16 µg/m<sup>3</sup>).
- 1.22 Analysis of the daily exceedances results determine that short term PM<sub>10</sub> concentrations are also well below the corresponding objective of no more than 35 daily incidences of levels above 50µg/m<sup>3</sup> in any one year, and this is also consistent with past years data.
- 1.23 The 2021 PM<sub>10</sub> results are broadly consistent with those of the last six years, indicating that any exceedances of the air quality objectives in the future are very unlikely (see Chart 3 - dust).
- 1.24 In conclusion, there was a slight increase in NO<sub>2</sub> concentrations across the borough for the diffusion tube monitoring sites, with 42 of 54 monitored concentrations (continuous monitor and 53 diffusion tubes) recording marginally higher values than 2020. Overall this represents an small average increase of 4.5% from the 2020 figures but a 28% reduction from 2013 data, the last year that was unaffected by road works or COVID-19, and the overall trend remains downward.
- 1.25 It should be noted that the small increase in NO<sub>2</sub> levels in 2021 is likely related to the ending of COVID-19 lockdowns during the year. The Council will continue looking closely at the monitoring data during 2022 as normal traffic levels are restored.
- 1.26 The monitoring results showed that exceedances of the relevant PM<sub>10</sub> and NO<sub>2</sub> objectives, either short or long term, are unlikely at any residential properties in the Borough, or at other places of 'relevant exposure'.
- 1.27 There is no statutory obligation on council's to monitor fine particles known as PM<sub>2.5</sub> (less than 2.5µm diameter) yet, but the council is expected to seek a reduction in emissions or concentrations. The Council uses background mapping and modelling provided by Defra and from our own studies to determine that the background annual average PM<sub>2.5</sub> concentrations in Surrey Heath ranged from 9 µg/m<sup>3</sup> to 13 µg/m<sup>3</sup> in 2021. This is roughly half the EU limit value of 20 -25 µg/m<sup>3</sup>. In addition, as annual

levels of PM10 are well below the objective, it is inferred that PM 2.5 concentrations here are likely to be compliant with this limit based on the empirical relationship published in relevant technical guidance (LAQM.TG (16)). New Government guidance under the Environment Act 2021 was expected by 31<sup>st</sup> October 2022 on the measures and monitoring that local authorities would be expected to undertake for this pollutant in the coming years, but this has been delayed and no new timeframe provided.

- 1.28 A full summary of monitoring results for 2021 is available on the Council's website together with real time monitoring which can be accessed by selecting air quality in Surrey Heath where there is also an indication of the health risks associated with the levels. <https://www.surreyheath.gov.uk/residents/environmental-services/noise- nuisance-pollution/air-quality>

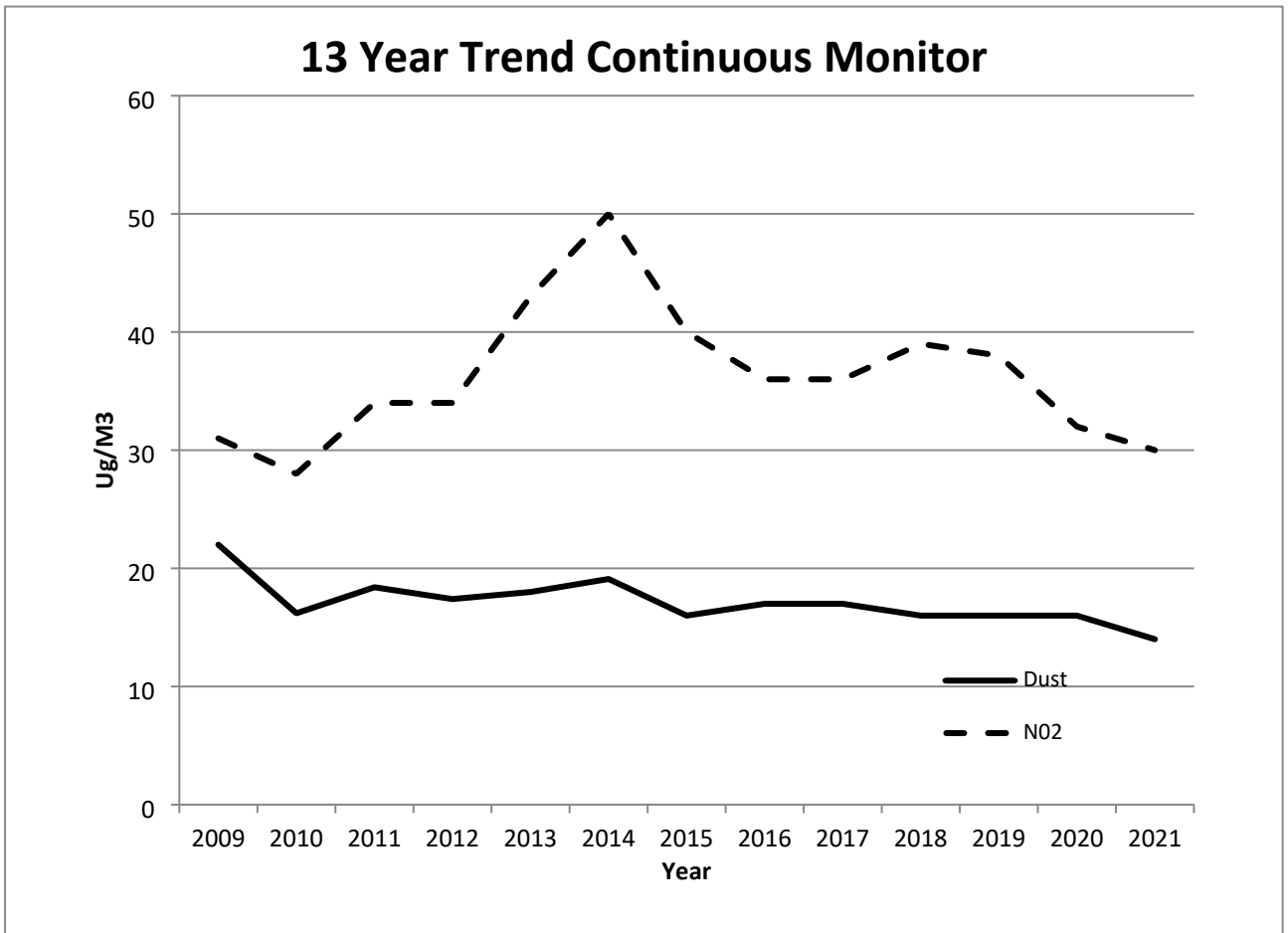
### Levels alongside the M3 Motorway through the Borough.

- 1.29 Both NO2 and PM10 are measured continually at Castle Road and NO2 at representative locations where people live aside the motorway through the Borough. Comparing levels pre smart 2013 with those in 2021 indicates a 26% fall in NO2 levels. Table 3 and Charts 3 and 4 detail the results.

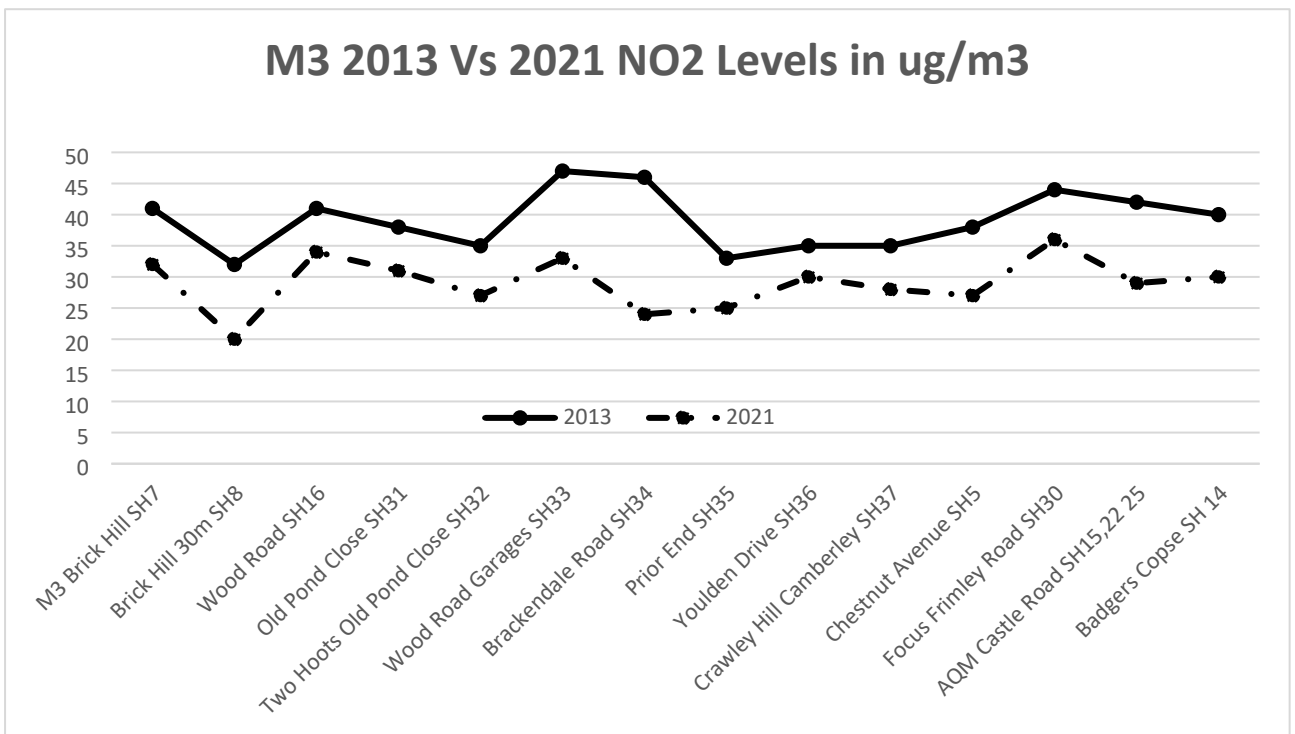
**Table 3: Monitoring of NO2 near M3.**

Location Adjacent to M3	2013	2019	2020	2021
Castle Road Continuous Monitor	43	38	32	30
M3 Brick Hill SH7	41	40	32	32
Brick Hill 30m SH8	32	25	35	20
Wood Road SH16	41	44	28	34
Old Pond Close SH31	38	35	28	31
Two Hoots Old Pond Close SH32	35	30	32	27
Wood Road Garages SH33	47	40	23	33
Brackendale Road SH34	46	33	25	24
Prior End SH35	33	33	31	25
Youlden Drive SH36	35	30	23	30
Crawley Hill Camberley SH37	35	33	26	28
Chestnut Avenue SH5	38	33	28	27
Focus Frimley Road SH30	44	35	23	36
AQM Castle Road SH15,22 25	42	37	34	29
Badgers Copse SH14	40	31	19	30
Total of all in M3 corridor	547	479	387	406

**Chart 3: Continuous Monitoring Results Pre and post SMART motorway work.**



**Chart 4: Diffusion Tube Results pre and post widening.**



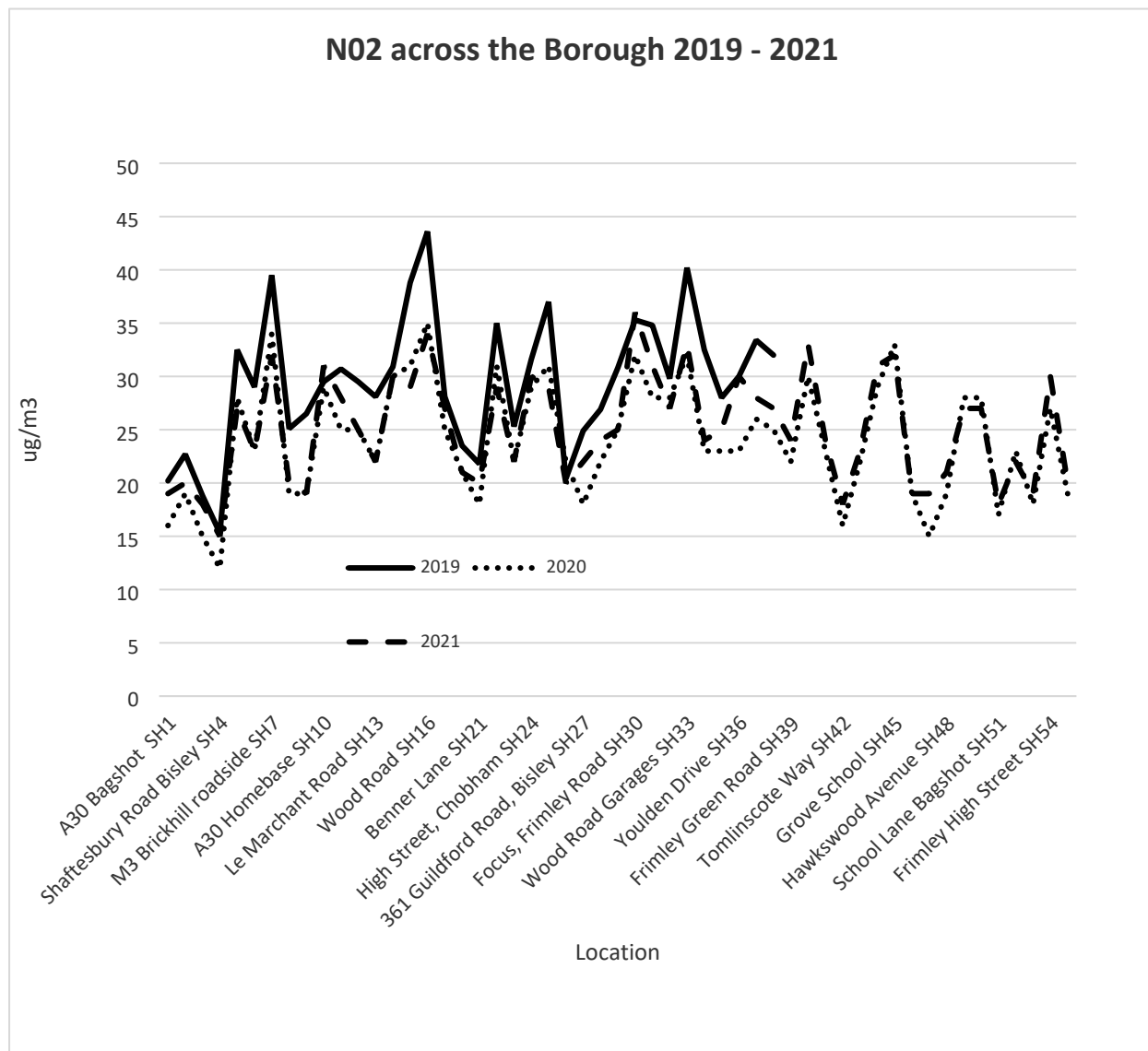
- 1.30 In 2021 there were no exceedance's of legal maximum limits anywhere at relevant exposures adjacent to the motorway through the Borough.
- 1.31 In the period of smart works (2014-2017) there was a 50mph limit imposed. Initially this resulted in a rise in pollution because lanes were moved closer to the motorway edge hence residential areas, before being moved over toward the central reservation a year later. (Chart 3). The average NO<sub>2</sub> levels during the works thereon was 37 µg/m<sup>3</sup> which rose to 39 µg/m<sup>3</sup> when it fully reopened. In 2021 the level was 30 µg/m<sup>3</sup> which is below the 2013 pre smart work level of 43 µg/m<sup>3</sup>
- 1.32 As regards adverse conditions and episodes, these short term effects are addressed by the 1 hour means. For NO<sub>2</sub>, the air quality objective allows a max number of 18 times a year with levels above 200ug/m<sup>3</sup>. There have been no occasions when this was exceeded since 2015.
- 1.33 The annual mean PM<sub>10</sub> concentration for 2021 was 14 µg/m<sup>3</sup>, which is well below the annual mean PM<sub>10</sub> objective (40 µg/m<sup>3</sup>) and represents a decrease from that in 2020 (16 µg/m<sup>3</sup>). Based on the recent years' monitoring results, it can be concluded that annual mean PM<sub>10</sub> concentrations would not be expected to deviate significantly from the recently observed trend without significant new sources being introduced.
- 1.34 The daily mean PM<sub>10</sub> short term objective value of 50 µg/m<sup>3</sup> was not exceeded during 2021 and consequently, the daily mean objective (35 permitted days) was achieved. This result remains consistent with previous years.

#### **Trends and Effects of the Lockdown.**

- 1.35 In general, in 2021 there was a slight increase in NO<sub>2</sub> concentrations across the borough for the diffusion tube monitoring sites, with most of the monitored concentrations recording marginally higher values than in 2020.
- 1.36 The highest concentration recorded during 2021 was at SH30 at Frimley Road adjacent to M3 flyover (35.7 µg/m<sup>3</sup>), which was below the annual mean NO<sub>2</sub> objective. This is a very marginal increase over the highest concentration recorded in 2020 at SH16 Wood Road (35.4 µg/m<sup>3</sup>). This increase is as expected considering to the effects of the easing of COVID-19 restrictions during the year.

See Chart 3 below for the 2019/2020/2021 comparison of results across all the tube locations and Chart 4 for the changes that occurred month by month in 2021.

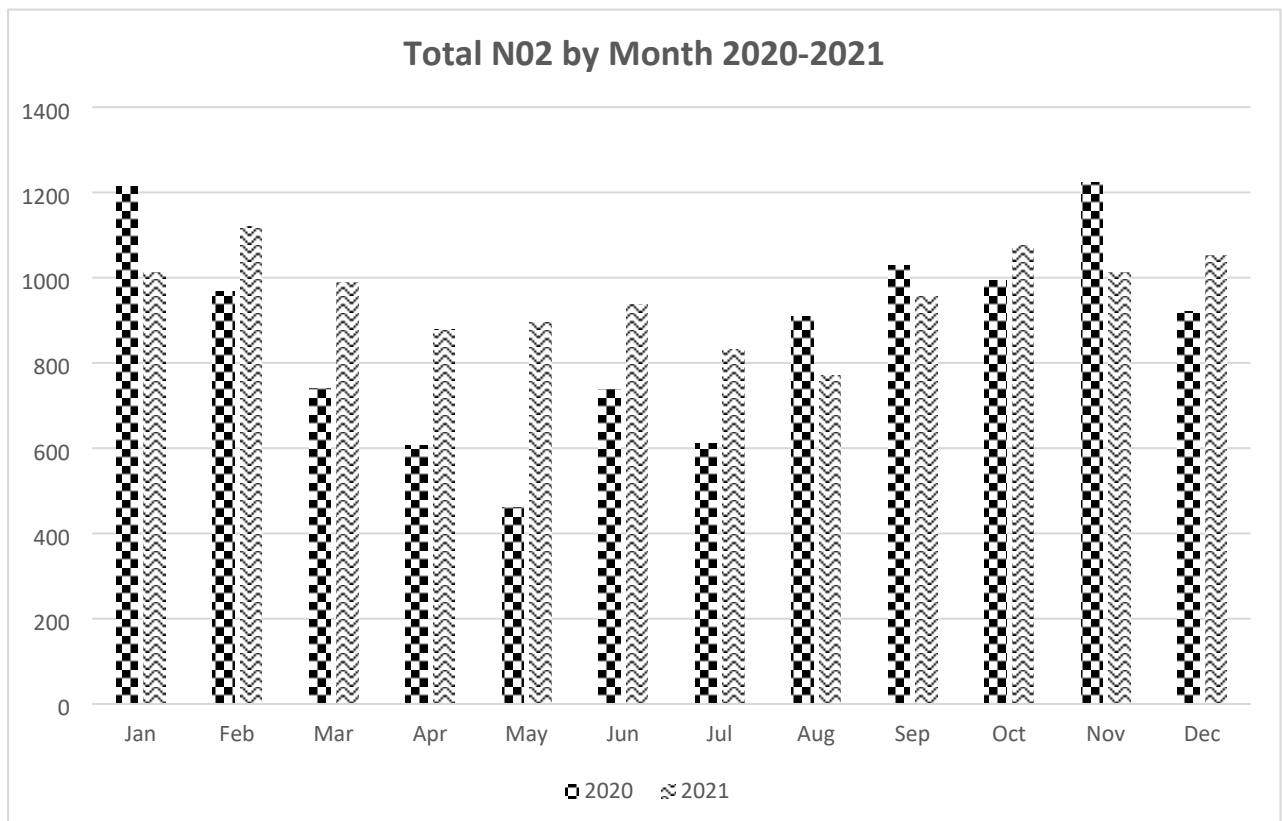
Chart 5: 2020 Vs 2021 and 2019 Jan – Dec NO2.



- 1.37 To note from Chart 3 is the downward trend of NO2 **since 2014**. This can be expected bearing in mind the lower traffic levels associated with the lockdowns in 2020/21 and the reduced speeds on the motorway due to roadworks during 2014-2018, whilst the levels of PM10 are unchanged. This provides further robust evidence and confirmation that road traffic is not the principle contributor of dust pollution in the Borough.
- 1.38 Chart 5 demonstrates the fall in nitrogen dioxide levels across the Borough during the two years affected by COVID-19 restrictions when compared against a normal year of 2019.

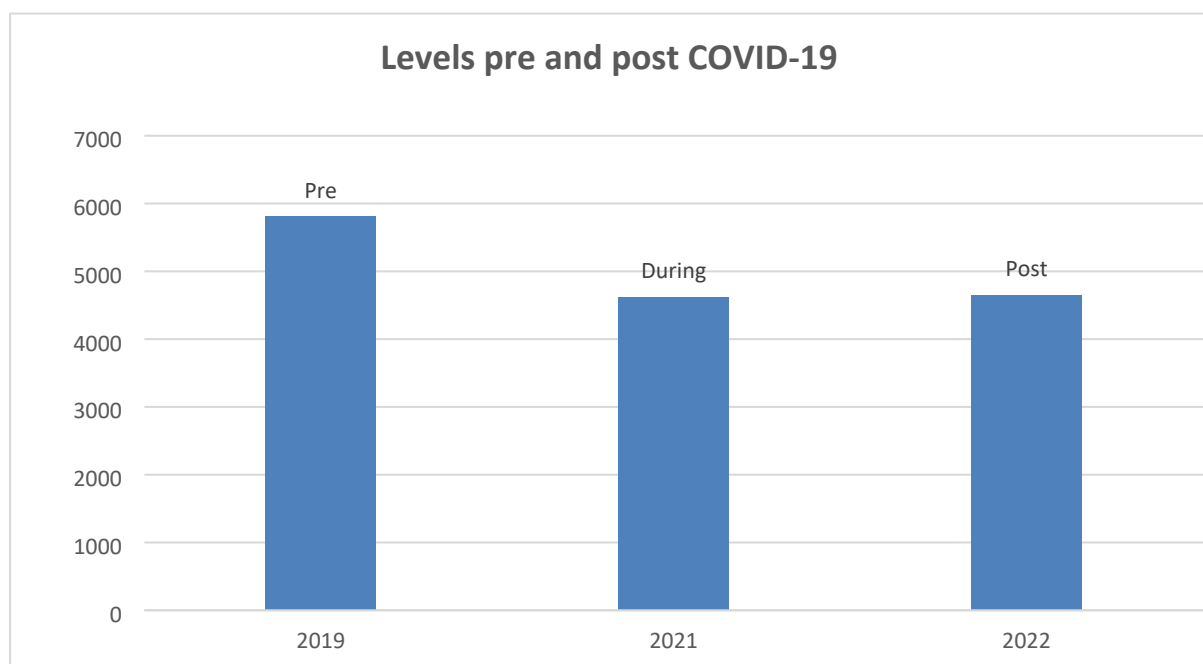


**Chart 6: Total NO2 Levels at All Locations by Month 2020-2021.**



- 1.39 Lockdown dates in 2021 were phased January to April with full lifting not until July. In 2020 they were April to July and November to December. The fall in NO2 pollution during the 2021 main lockdown period was 27%, calculated by comparing the average of the tube network in January to April 2021 with the same period in 2020.
- 1.40 The levels in post lockdown 2021 (July to December) compared to those for the same period of 2020 pre lockdown, were on average 18% higher.
- 1.41 To date despite the complete removal of restrictions associated with coronavirus and its consequence of less road traffic, levels across the entire Borough and within the AQMA are less than 1% higher this year 2022 than last and are 20% lower than pre pandemic levels recorded in 2019. Chart 7 demonstrates this data.
- 1.42 It is important to note that 2022 figures are provisional and liable to change as the seasonality of air quality means that higher levels are typically recorded over the winter months, which may raise the final annual mean results.

**Chart 7: Levels across all sites Jan – Jul each year.**



#### **Air Quality Management Area Action Plan.**

- 1.52 Following the declaration of the AQMA in 2002, the Council were required to prepare an Air Quality Management Area Action Plan (AQAP). The AQAP was adopted in 2005 and set out the measures the Council intended to implement to address air quality issues in the Borough and to meet the UK air quality objectives. The plan identified a number of considerations and options for National Highways to consider.
- 1.53 The vast majority of the actions identified in the plan have been completed and those outstanding are shown in Table 2.2 of the ASR. A number of National Highways traffic management actions have not been pursued because the good air quality compliance locally meant these were not a priority for them given demands from the rest of the national motorway network.
- 1.54 Where possible the Council has undertaken activities to promote the reduction in traffic pollution levels including promotion of low pollution vehicles and electric vehicle charging infrastructure, working with transport companies to provide real time bus information, installation of cycle racks in schools and at Frimley Park Hospital, the introduction of an agile working policy, the building of a website specific to air quality, funding to schools for equipment such as hi-vis vests to encourage walking and others.
- 1.55 Since the ASR was finalised the Council has undertaken further work to promote low emission transport, with a project underway to install electric vehicle charging points in Council car parks from August 2023.

#### **A331 Blackwater Valley Road.**

- 1.56 The Council continues its work as part of the Blackwater Valley Group with Rushmoor Borough Council to address exceedances of the NO2 statutory annual mean limit along part of the A331, identified by Defra in 2017 to be contributing to a

national exceedance. As a result of the group's work, in May 2019 a temporary 50mph limit was imposed along the stretch of road in both directions between the A325 Farnborough Road and the Coleford Bridge Road junctions. Evaluation on the effect of this on reducing NO<sub>2</sub> levels to no more than 40µg/m<sup>3</sup> over a period of time will be reported on fully by 2024 when the programme finishes. Provisionally, since installed, the speed reduction has resulted in a 1ug/m<sup>3</sup> reduction alongside the road which would achieve compliance, and the Council is in communication with Defra on what is required by them to sanction its removal.

### **Future Actions.**

- 1.57 It is the intention that the AQMA for short term PM<sub>10</sub> be revoked as there have been no exceedances at relevant exposure locations for over five years. As regards NO<sub>2</sub>, due to lack of a three year 'normal' data collection period since motorway full lane running, we will be retaining the AQMA until this data has been collected with a view to rescinding it for both pollutants simultaneously.
- 1.58 The Council remains committed to continuing to implement the outstanding actions within the existing AQAP, in pursuit of further improving air quality within the Borough. However, the M3 motorway is out of the control of the Council. We do not foresee any local measures that can be carried out to reduce traffic emission levels on the M3 other than a speed restriction proposal and remain supportive of this should the monitoring data reveal it is necessary.
- 1.59 Officers continue to work and liaise with the Surrey Air Alliance members and where appropriate and resources permit, will participate in local air quality projects and initiatives. This, for example, includes Surrey wide air quality modelling, taxi vehicle licensing policy review, the control of sale and burning of domestic solid fuel, and project work with schools.
- 1.60 Officers will continue to enforce legislation that can have an impact on air quality such as reducing pollution from construction/trade/business sites and responding to complaints about domestic bonfires and smoke.
- 1.61 Under the Environment Act 2021, although currently delayed, the Government will be publishing new statutory guidance for local authorities which is expected to include stricter air quality objectives, including a new objective relating to fine particulate matter PM<sub>2.5</sub>. A revised National Air Quality Strategy is expected to be forthcoming that will likely strengthen the existing Local Air Quality Monitoring framework to enable greater cooperation at local level and broaden the range of organisations that play a positive role in contributing to improved local air quality. The Council will implement, review and revise the Borough's local air quality strategy accordingly and reflect in the annual planning as necessary.
- 1.62 In anticipation of the new PM<sub>2.5</sub> targets, in 2022 officers submitted a grant application to Defra seeking funding to purchase a portable PM<sub>2.5</sub>/PM<sub>10</sub> monitor with supporting packages, and to expand and improve Surrey Heath's air quality webpage. An enhanced air quality website can communicate the most relevant information. Further outreach to schools and care homes is proposed to promote the effective protective and preventive measures that vulnerable individuals can adopt to reduce their exposure, as well as measures individuals can take to improve local air quality.
- 1.63 In addition, a separate second Defra grant application was made to fund the raising of awareness about the burning of solid fuels, which contribute to PM levels, in

conjunction with other Surrey local authorities and Surrey County Council. Should this application be successful, information packages on minimising the impacts from burning solid fuel will be made available to raise awareness amongst the public.

- 1.64 In 2022, further to Member comments received on last year's ASR, an additional two monitoring sites in Mytchett have been added to the network. The results will be reported upon in the 2023 Annual Status Report.

## **2. Reasons for Recommendation**

- 2.1 Air quality monitoring work is undertaken by the Council under its Local Air Quality Management statutory duties

## **3. Proposal and Alternative Options**

- 3.1 None applicable.

## **4. Contribution to the Council's Five Year Strategy**

- 4.1 The Council's local air quality management work is included in the Council's 2022/23 Annual Plan and will contribute to the following aims within the Council's 2022- 2027 Five Year Strategy priorities:
- i. Environment - Improve the air quality of the borough by working with partners to improve public transport and supporting and enabling greener and more active methods of travel.
  - ii. Health and wellbeing - Support health and wellbeing by promoting and developing initiatives that means residents can lead active and healthy lives.
  - iii. The Councils LAQM work will also contribute to Objective 3 of the Climate Change Action Plan;
  - iv. Work with partners to support initiatives and infrastructure to increase the uptake of walking, cycling and public transport, and low emission vehicles.

## **5. Resource Implications**

- 5.1 There are no resource implications at this time. Local air quality management work is funded from existing budgets, with additional Government funding having been successfully sought in the past for specific work in relation to the M3 AQMA and the A331. In 2022, a grant has been applied for specific air quality work related to initiatives that may be required under the Environment Act 2021. Successful awards will not be notified until March 2023.

## **6. Section 151 Officer Comments:**

- 6.1 Set out in the body of the report.

## **7. Legal and Governance Issues**

- 7.1 The Council's Local Air Quality Management work is a statutory duty and anticipated changes under the provisions of the Environment Act 2021 will be kept under review and implemented as is required.
- 7.2 Diffusion tubes are supplied and analysed by Lambeth Scientific Services, a NAMAS approved laboratory and readings from the continuous monitor are ratified and adjusted by an external consultant to ensure accuracy of results. Quality assurance details are contained in Appendix C of the ASR 22. Insert text

## **8. Monitoring Officer Comments:**

- 8.1 Nothing further to add.

## **9. Other Considerations and Impacts**

### **Equalities and Human Rights**

- 9.1 The work on air quality is of universal benefit to all residents and visitors of the Borough regardless of age, sex, race, faith disability, and sexuality and especially to those vulnerable members of the community having health problems, the old and the very young whom are most affected by poor air quality.

### **Annexes**

Annex A: Extract regarding meaning of relevant exposure.

Annex B: Trends in Nitrogen Dioxide Levels.

### **Background Papers**

None

**Relevant Exposure;** Where the Air Quality Objectives Apply.

Averaging Period	Objectives should apply at:	Objectives should generally not apply at:
Annual mean	All locations where members of the public might be regularly exposed. Building façades of residential properties, schools, hospitals, care homes etc.	Building façades of offices or other places of work where members of the public do not have regular access. Hotels, unless people live there as their permanent residence. Gardens of residential properties. Kerbside sites (as opposed to locations at the building façade), or any other location where public exposure is expected to be short term.
24-hour mean	All locations where the annual mean objective would apply, together with hotels. Gardens of residential properties at locations where people may sit for long periods.	Kerbside sites (as opposed to locations at the building façade), or any other location where public exposure is expected to be short term.
1-hour mean	All locations where the annual mean and: 24 and 8-hour mean objectives apply. Kerbside sites (for example, pavements of busy shopping streets). Those parts of car parks, bus stations and railway stations etc. which are not fully enclosed, where members of the public might reasonably be expected to spend one hour or more. Any outdoor locations where members of the public might reasonably be expected to spend one hour or longer.	Kerbside sites where the public would not be expected to have regular access.

### Trends in Nitrogen Dioxide Levels

Chart 1: Diffusion Tubes by Year 2014-2022.

