Appendix 3: Investigating traffic displacement concerns

The purpose of Bath’s Clean air zone (CAZ) is to reduce air pollution and improve vehicle compliance in line with the minimum emissions standards, whilst minimising the impact of the CAZ on traffic flows in and around Bath.

Traffic flows have been substantially impacted by the Covid-19 pandemic. National traffic volumes are only just almost returning to pre-pandemic levels, and in the case of LGVs, exceeding pre-pandemic levels[[1]](#footnote-1). Locally, traffic volumes were slower to recover, however, the volumes recorded throughout 2023 are similar, if not only marginally lower, to those recorded pre-pandemic.

A key commitment for the Council is to monitor any concerns arising from the introduction of the CAZ. As a result, we are monitoring 10 discrete locations where the public have expressed concern over a perceived increase in traffic within their community since the introduction of the CAZ in March 2021. In addition to the temporary surveys detailed below, we have provided extra permanent ANPR cameras to monitor traffic flows and fleet composition through Bathampton where the community expressed concerns about potential traffic displacement during the development of the [Full Business Case](https://beta.bathnes.gov.uk/sites/default/files/2020-10/674726.br_.042.fbc_-_bath_clean_air_plan_fbc.pdf).

These 10 locations, and what we are doing to log, monitor and investigation concerns are listed in the tables below. The work is ongoing and will be updated annually in subsequent reports.

In terms of air quality, we report the nearest diffusion data to the area of concern to understand the situation more locally. The legal limit for nitrogen dioxide (NO2) is 40 μg/m3 as an annual average. To ensure compliance with the Ministerial Direction, we are generally concerned with any site where NO2 concentrations are above 36 μg/m3 (within 10% of the objective), to ensure we do not breach the objective.

Throughout this appendix, we reference traffic volumes over a weekday and 7-day average. A weekday average has been calculated using the volumes recorded between Monday and Friday. A 7-day average considers those volumes recorded between Monday and Sunday.

A range of monitoring methods are also referenced throughout this document, as well as our previous reports. The following bullet points outline these methods and the data they provide.

* **Temporary Radar Counter-** Records the volume of traffic only. No speed or classification data is available.
* **Temporary Automatic Traffic Counters (ATC)-** Records the volume and speed of vehicles. The classification is also recorded however, this is based on axle-distance so is not always accurate, particularly when classifying cars/vans and small HGVs
* **Temporary automatic number plate recognition camera (ANPR)-** ANPR cameras can accurately record the volume and classification of vehicles. In addition, the compliance status of the vehicle can also be determined by the vehicle’s registration number., i.e., whether a vehicle is of Euro 6 diesel or Euro 4 petrol standard.

Please note that traffic flow data is published in the 2023 Annual Monitoring Report accompanying this appendix. Due to unprecedented changes in travel behaviour during the Covid-19 pandemic, we are discounting data from 2020 for comparison purposes (unless otherwise stated).

The following summary table provides a summary of those locations which are included in this document, as well as a status of the case regarding the monitoring we have completed.

| **Location of Concern** | **Status of case**  |
| --- | --- |
| Whiteway Road | To be reviewed annually  |
| Lansdown Lane | To be reviewed annually  |
| Oldfield Park (Lyndhurst Road) | To be reviewed annually  |
| Charlcombe Lane | To be reviewed annually  |
| Upper Camden Place | To be reviewed annually  |
| Shophouse Road | To be reviewed annually  |
| Bradford Road and Brassknocker Hill | To be reviewed annually |
| Englishcombe Lane | To be reviewed annually |
| Cavendish Road | To be reviewed annually  |

Table 1, below, presents three locations (Whiteway Road, Lansdown Lane and Oldfield Park (Moorland Road)) which have previously been subject to ANPR monitoring following perceptions of increased non-compliance following the introduction of Bath’s Clean Air Zone. Whilst the surveys concluded that vehicle compliance was marginally lower than within the CAZ, the Council was encouraged by the increase in compliance between the previous surveys, and the reduction in NO2 ­concentrations. Therefore, moving forward, these locations will continue to be monitored and reviewed annually with ATCs to ensure that traffic volumes remain consistent, and that air quality continues to improve.

The results of the previous ANPR surveys at these three locations can be viewed via the following link: <https://beta.bathnes.gov.uk/sites/default/files/Appendix%202%20-%20Investigating%20traffic%20displacement%20concerns%20Q3%202022.pdf>

Table 1: Locations of investigation that have previously been monitored via ANPR surveys.

| **Area for investigation** | **Status** | **Air quality monitoring results** | **Traffic monitoring update for 2023** |
| --- | --- | --- | --- |
| Whiteway Road | Annual monitoring to continue.  | There are two diffusion tube locations situated along Whiteway Road. The 2023 annual NO2 concentration at Whiteway Road was 13 μg/m3. This has decreased from 18 μg/m3 in 2019.The 2023 annual NO2 concentration at Whiteway Road 2 was 16 μg/m3. This has decreased from 25 μg/m3 in 2019.  | The primary concern along Whiteway Road was the perceived increase in HGV volumes following the launch of the CAZ.In 2022, the total number of HGVs remained almost identical to the pre-CAZ baseline, with HGVs making up around 4% of total traffic. A monitoring survey conducted in November 2023 shows these volumes have decreased when compared to 2022 and thus the pre-CAZ baseline. This location will continue to be monitored and reviewed annually.  |
| Lansdown Lane | Annual monitoring to continue. | The 2023 annual NO2 concentration at Lansdown Lane was 17 μg/m3. This has decreased from 21 μg/m3 in 2019. | The primary concern along Lansdown Lane was the perceived increase in non-compliant vehicles. Whilst ATC surveys do not gather compliance data, they do provide an insight into the total number of vehicles using the area, with air quality monitoring also informing us of any increases in pollution. A monitoring survey conducted in November 2023 found both the 5-day and 7-day average total traffic volumes to be lower than in 2018 and 2019, both pre-CAZ implementation. Nitrogen dioxide concentrations are also continuing to decrease, remaining below the objective.This location will continue to be monitored and reviewed annually. |
| Oldfield Park (Moorland Road)  | Annual monitoring to continue.  | The 2023 annual NO2 concentration at Moorland Road was 15 μg/m3. This has decreased from 22 μg/m3 in 2019. | The primary concern along Moorland Road was the perceived increase in HGVs following the introduction of the CAZ.A survey was conducted along Moorland Road in November 2023 which found total HGV volumes to be 60% lower than those volumes recorded in 2019. HGV volumes remained near identical to those recorded in 2022 and 2021. This location will continue to be monitored and reviewed annually.  |

Table 2: Further locations of investigation, reporting the results of ATC monitoring for 2023. The results of the previous monitoring surveys, as detailed in the 2022 Traffic Displacement Appendix, can be viewed via the following link: <https://beta.bathnes.gov.uk/sites/default/files/Appendix%202%20-%20Investigating%20traffic%20displacement%20concerns%20Q3%202022.pdf>

| **Area of investigation** | **Status** | **Air quality monitoring results** | **Traffic monitoring update for 2023** |
| --- | --- | --- | --- |
| Charlcombe Lane | Annual monitoring to continue.  | The 2023 annual NO2 concentration at Charlcombe Lane was 9 μg/m3. This has decreased from 14 μg/m3 in 2019.  | Monitoring along Charlcombe Lane took place in November 2023. Weekday traffic volumes were on average 33% **lower** than the 2019 baseline. Additionally, volumes were 13% **lower** than the same period in 2022. This location will continue to be monitored and reviewed annually.  |
| Upper Camden Place | Annual monitoring to continue. | The 2023 annual NO2 concentration at Upper Camden Place was 15 μg/m3. This has decreased from 25 μg/m3 in 2019. | This location is one that had previously been affected by the closure of Cleveland Bridge. Since the full reopening of the bridge (subject to an 18-tonne weight restriction), weekday traffic volumes recorded in November 2023 are almost identical to those recorded in 2019. When compared to the same period in 2022, traffic volumes have **decreased** by 3%. This location will continue to be monitored and reviewed annually.  |
| Shophouse Road | Annual monitoring to continue. | The nearest monitoring site to Shophouse Road was The Hollow. The 2023 annual NO2 concentration at this location was 16 μg/m3. This has decreased from 24 μg/m3 in 2019. | A monitoring survey was conducted along Shophouse Road in November 2023. The 7-day average traffic volumes remain **increased** when compared to a 2019 pre-CAZ baseline. However, the total volume of HGVs has **decreased** in 2023 when compared to 2019. Concentrations of NO2 have also continually **decreased** when compared to 2019. This location will continue to be monitored and reviewed annually.  |
| Brassknocker Hill | Annual monitoring to continue.  | The 2023 annual NO2 concentration at Brassknocker Hill was 22 μg/m3. This has decreased from 37 μg/m3 in 2019. | Along Brassknocker Hill, weekday traffic counters have decreased on average 4% when compared to 2019, and 3% when compared to 2022. As reported within the [2022 Traffic Displacement Appendix](https://beta.bathnes.gov.uk/sites/default/files/Appendix%202%20-%20Investigating%20traffic%20displacement%20concerns%20Q3%202022.pdf), overall volumes remain much lower when compared to 2016.  |
| Bradford Road | Annual monitoring to continue.  | The 2023 annual NO2 concentration at Bradford Road was 18 μg/m3. This has decreased from 28 μg/m3 in 2019. | As detailed within the [2022 Traffic Displacement Appendix](https://beta.bathnes.gov.uk/sites/default/files/Appendix%202%20-%20Investigating%20traffic%20displacement%20concerns%20Q3%202022.pdf), HGV volumes along Bradford Road have increasedwhen compared to 2019. Whilst this could be the result of the 18-tonne weight restriction on Cleveland Bridge, this location will continue to be monitored and review.  |
| Englishcombe Lane | Annual monitoring to continue. | The 2023 annual NO2 concentration at Englishcombe Lane was 9 μg/m3. This has decreased from 14 μg/m3 in 2019. | Monitoring along Englishcombe Lane took place in November 2023. When compared to the same period in 2019, weekday average traffic volumes have **decreased** 20%. When compared to the same period in 2022, traffic volumes are much **lower** in 2023. However, this is likely to be unrepresentative as a road closure during the 2022 survey period diverted traffic onto Englishcombe Lane.This location will continue to be monitored and reviewed annually.  |
| Cavendish Road | Annual monitoring to continue.  | The 2023 annual NO2 concentration at Cavendish Road was 12 μg/m3. This has decreased from 17 μg/m3 in 2019. | Monitoring along Cavendish Road took place in November 2023. When compared to 2021, weekday average traffic counts have **decreased** by 18%. There has been a marginal **increase** in volumes when compared to the same period in 2022, however, the 2022 survey was impacted by nearby roadworks likely diverting traffic. This location will continue to be monitored and reviewed annually.  |

1. Department for Transport, 2024. Domestic Transport Usage by Mode. Available at: <https://www.gov.uk/government/statistics/transport-use-during-the-coronavirus-covid-19-pandemic/domestic-transport-usage-by-mode> [↑](#footnote-ref-1)