

Appendix 2: Investigating concerns of traffic displacement

The purpose of the clean air zone is to improve vehicle compliance in line with minimum emission standards, while minimising the impact of the CAZ on normal traffic flows in and around Bath.

Traffic flows have been substantially impacted by the Covid-19 lockdowns in 2020 and are still to return to pre-pandemic levels. Data gathered from permanent automatic traffic counts in and around the zone tell us that in the second quarter of the year (April to June 2021), general traffic flows across an average 7-day week were down by 8.9% in the CAZ, 11.5% in the urban area outside of the CAZ, and 8.3% in the wider B&NES area, compared with the same quarter in 2018 (our baseline year). This is an average decrease in traffic of 9.9% across all site groupings for the quarter compared with 2018.*

Despite this general reduction in traffic levels, a key commitment for the council is to monitor any concerns arising from the introduction of the CAZ, so we are investigating 15 discrete locations where the public have expressed concern over a perceived increase in traffic in their communities since the launch of the clean air zone. In addition, we have provided extra ANPR cameras to monitor traffic flows and fleet composition through Bathampton where the community expressed concerns about displacement during the development of the Full Business Case.

The areas of concern, and what we're doing to log, investigate and monitor these are listed in the figure and table below. The work is ongoing and will be updated in subsequent reports. In parallel to these investigations, data is being retrieved and analysed from ANPR cameras located in Bathampton and this information will be shared with the local community in due course.

In terms of air quality, the legal limit for annual average NO₂ pollution is 40 µg/m³. We are generally concerned with any site where NO₂ concentrations are currently over 36 µg/m³, to ensure that they don't breach the 40 µg/m³ limit as an annual mean.

*Traffic flow data is published in the CAZ Quarterly Monitoring Report, April to June 2021 accompanying this appendix. Due to unprecedented changes in travel behaviour during the Covid-19 lockdowns, we are discounting data from 2020 for comparison purposes. In 2019, there was insufficient data collected for comparison purposes.

How we're investigating possible traffic displacement

Since the launch of the CAZ in March 2021, we have logged and investigated comments from residents about potential CAZ-related impacts. Figure 1 shows the process for following up and investigating these queries.

Figure 1: Process for following up and investigating traffic displacement concerns

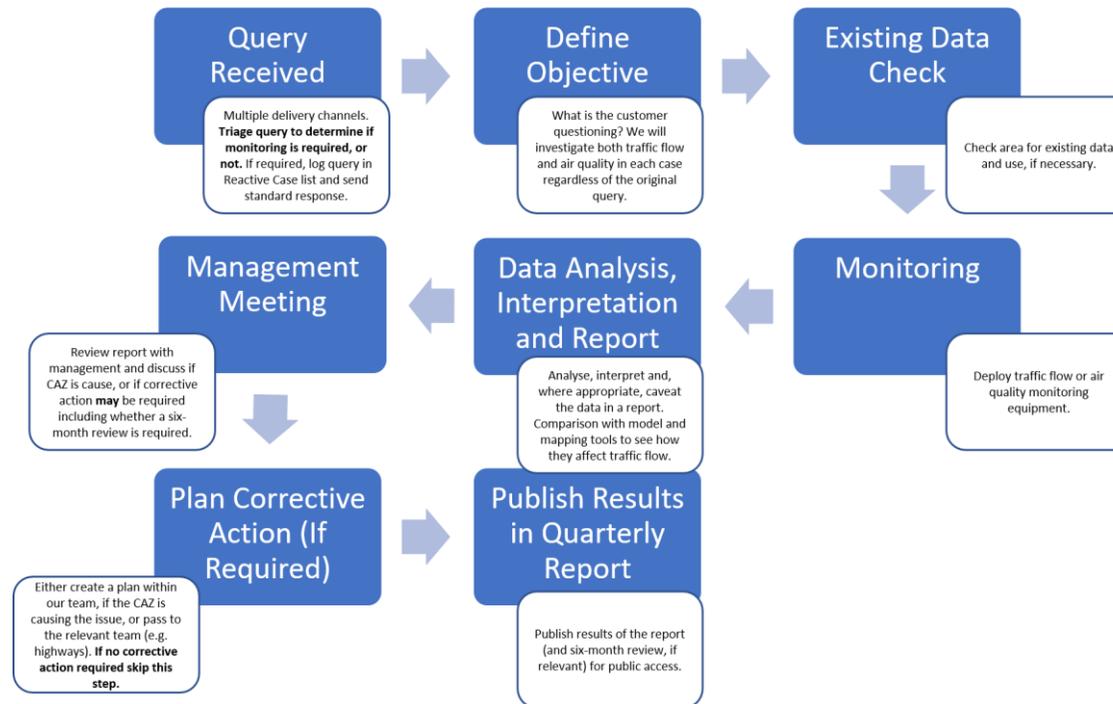


Table 1: Actions taken to investigate areas of concern, with available results and next steps

Area for investigation	Status	Monitoring undertaken	Traffic monitoring results	Air quality monitoring results	Next steps
Colliers Lane	Initial monitoring complete.	One temporary automatic traffic counter during a 7-day period in April 2021. Singular diffusion tube air quality monitoring.	During April 2021, data collected shows a 20% increase in traffic volumes compared to January 2021. However, general traffic levels in January 2021 were 40% lower than pre-pandemic levels.	The nearest available monitoring site from Colliers Lane is at Granville Road and the NO ₂ level in June 2021 was 16 µg/m ³ .	No further monitoring required at this stage, due to no discernible increase in traffic volumes. This will be reviewed in 6 months.
Charlcombe Lane	Initial monitoring complete.	Three temporary radar automatic traffic counters for a 7-day period in July 2021. Singular diffusion tube air quality monitoring.	The 5-day average shows that the morning and afternoon peak flows are significantly lower in 2021 than compared with 2019. Interpeak traffic flows are slightly higher than in 2019, however this is replicated on other roads since the pandemic, with lower morning peak flows and higher interpeak flows.	The post-CAZ NO ₂ concentration at Charlcombe Lane measured at 9 µg/m ³ in June 2021 compared to 13 µg/m ³ in June 2019. For context, the 2019 annual average at this location was 11 µg/m ³ .	No further monitoring required at this stage, due to no discernible increase in traffic volumes. This will be reviewed in 6 months.

Area for investigation	Status	Monitoring undertaken	Traffic monitoring results	Air quality monitoring results	Next steps
Upper Camden Place	Initial monitoring complete.	<p>One temporary radar automatic traffic counter deployed in July 2021 for a period of 7-days.</p> <p>Singular diffusion tube air quality monitoring.</p>	<p>The volume of traffic on Camden Road is down 25% in July 2021 compared to June 2021.</p> <p>On average 2021 daily total volumes on Camden Road are 12% lower compared to 2017.</p> <p>However, traffic in general was still 8% down on pre-pandemic levels in B&NES when monitoring was carried out.</p>	<p>The post-CAZ NO₂ concentration at Upper Camden Place measured at 17 µg/m³ in June 2021 compared to 21 µg/m³ in June 2019.</p> <p>For context, the 2019 annual average at this location was 26 µg/m³.</p>	<p>No further monitoring required at this stage, due to no discernible increase in traffic volumes.</p> <p>This will be reviewed in 6 months.</p>
Southdown Road	Initial monitoring complete.	<p>One temporary radar automatic traffic counter deployed in July 2021 for a period of 7-days.</p> <p>Singular diffusion tube air quality monitoring.</p>	<p>Comparing 2021 data to 2019 the traffic levels on Southdown Road have dropped 13.4% (5-day average) and 11.4% (7-day average).</p> <p>The AM peak has significantly reduced whilst the PM peak has reduced slightly.</p>	<p>The nearest available monitoring site from Southdown Road was Coronation Avenue. The NO₂ concentration at this location in June 2021 was 13 µg/m³.</p>	<p>No further monitoring required at this stage, due to no discernible increase in traffic volumes.</p> <p>This will be reviewed in 6 months.</p>

Area for investigation	Status	Monitoring undertaken	Traffic monitoring results	Air quality monitoring results	Next steps
Old Newbridge Hill	Initial monitoring complete.	<p>Neo Traffic Data using one automatic tube counter plus one Miovision camera for turning count analysis for a 7-day period during July 2021.</p> <p>Singular diffusion tube air quality monitoring.</p>	Overall traffic volume is lower in 2021 compared to 2019; further analysis is required to understand whether the proportion of HGVs, out of the total traffic using the road, has changed.	<p>The post-CAZ NO₂ concentration at Old Newbridge Hill measured at 26 µg/m³ in June 2021 compared to 22 µg/m³ in June 2019.</p> <p>For context, the annual average NO₂ level in 2019 at this location was 23 µg/m³.</p>	New weight limit restriction being explored for this location together with further monitoring, if necessary.
Twerton High Street	Initial monitoring in progress.	Singular diffusion tube installed in August 2021 for a period of at least 3-months.	N/A	Being undertaken.	Awaiting results of monitoring and analysis.

Area for investigation	Status	Monitoring undertaken	Traffic monitoring results	Air quality monitoring results	Next steps
<p>Brook Road/West Avenue/Lyndhurst Road/Bellotts Road</p>	<p>Initial monitoring complete.</p>	<p>Five pneumatic traffic counters were deployed at the following locations during a 7-day period in July 2021: Millmead Road, West Avenue, South Avenue, Brook Road and Triangle North.</p> <p>Singular diffusion tube air quality monitoring.</p>	<p>Monitoring along Moorland Road during July 2021 showed a potential increase in average weekday larger vehicle (HGVs and buses/coaches) volume when compared to 2019.</p>	<p>The nearest available monitoring site from Brook Road is at Moorland Road. The NO₂ concentration at this location in June 2021 was 14 µg/m³.</p>	<p>Further monitoring with temporary ANPR cameras to be carried out to understand the compliance split between vehicle types (i.e. are these non-compliant larger vehicles seeking to avoid CAZ charges).</p> <p>Further observations to be carried out in the vicinity of the area to observe the potential sources and routing of vehicles.</p>

Area for investigation	Status	Monitoring undertaken	Traffic monitoring results	Air quality monitoring results	Next steps
Whiteway Road	Initial monitoring complete.	<p>One permanent ATC and two temporary volume and speed counters for a 7-day period in June 2021.</p> <p>Singular diffusion tube air quality monitoring at two locations along Whiteway Road.</p>	<p>Monitoring after the CAZ launch showed a 4.7% increase in rigid HGVs and an 8.3% increase in articulated trucks compared to September 2020. However overall traffic volumes in September 2020 were lower than since the launch of the CAZ.</p> <p>However, a percentage of overall traffic volume, HGVs accounted for 4.5% of all traffic in both September 2020 and for the period since the launch of the CAZ.</p> <p>Comparing 2021 to 2018, results show a slight decrease in mean speed to 28 mph.</p>	<p>Diffusion tubes along Whiteway Road were not deployed until August 2019.</p> <p>However, in June 2021 NO₂ concentrations at Whiteway measured at 19 µg/m³ and 20 µg/m³ at Whiteway 2.</p>	<p>Whilst modelling predicted a slight increase in traffic volumes in this location, monitoring will be continued with a temporary ANPR camera to understand the percentage of non-compliant HGVs and trucks using this route, to establish whether these vehicles are seeking to avoid zone charges.</p>

Area for investigation	Status	Monitoring undertaken	Traffic monitoring results	Air quality monitoring results	Next steps
Shophouse Road	Initial monitoring complete.	<p>Neo Traffic Data using one tube counter (speed and classification) for a 7-day period in July 2021.</p> <p>Singular diffusion tube air quality monitoring.</p>	<p>Vehicle numbers are higher than in 2019.</p> <p>Larger vehicle numbers are also higher when compared with 2019 data however, in 2019 larger vehicles accounted for 8% of all vehicles on Shophouse Road and in 2021 they accounted for 7%.</p> <p>Average speed is 19 mph.</p>	<p>The nearest available monitoring site from Shophouse Road was The Hollow. The NO₂ concentration at this location in June 2021 was 20 µg/m³.</p>	<p>Whilst modelling predicted a slight increase in traffic volumes in this location, monitoring will be continued with a temporary ANPR camera to understand the percentage of non-compliant HGVs and trucks using this routes, to establish whether these vehicles are seeking to avoid zone charges.</p>

Area for investigation	Status	Monitoring undertaken	Traffic monitoring results	Air quality monitoring results	Next steps
Lansdown Lane	Initial monitoring complete	<p>Two weeks of camera monitoring post-CAZ launch with comparison made to pre-existing data collected in 2018-2019.</p> <p>A manual traffic count occurred in May 2020.</p> <p>Singular diffusion tube air quality monitoring.</p>	<p>During March 2021, data collected shows reduced traffic levels between 12% to 16% over a 7-day period.</p> <p>However, this was in March 2021 when traffic levels were generally around 30% lower than pre-pandemic levels.</p> <p>Post-CAZ HGV numbers were found to be low whereas LGV numbers were higher in March 2021 than in 2018-2019.</p>	<p>The post-CAZ NO₂ concentration at Lansdown Lane was 17 µg/m³ in May 2021 compared to 16 µg/m³ in June 2019.</p> <p>For context, the annual average NO₂ level in 2019 at this location was 22 µg/m³.</p>	<p>Temporary Automatic Number Plate Recognition (ANPR) cameras to be installed to monitor compliance split of vehicle types to further investigate the reason for the increase in LGV numbers and whether these are non-compliant LGVs seeking to avoid CAZ charges.</p>
Rosemount Lane	Initial monitoring complete.	<p>One temporary radar automatic traffic counter deployed for a 7-day period in July 2021.</p> <p>Singular diffusion tube air quality monitoring.</p>	Awaiting analysis.	<p>The nearest available monitoring site is at Greenway Lane. The NO₂ concentration at this location in June 2021 was 8 µg/m³.</p>	Awaiting the results of analysis.

Area for investigation	Status	Monitoring undertaken	Traffic monitoring results	Air quality monitoring results	Next steps
Sham Castle Lane	Initial monitoring complete.	<p>One temporary radar automatic traffic counter deployed for a 7-day period in July 2021.</p> <p>Singular diffusion tube air quality monitoring.</p>	Awaiting analysis.	<p>The nearest available monitoring site from Sham Castle Lane was North Road. The NO₂ concentration at this location in June 2021 was 13 µg/m³.</p>	Awaiting results of analysis.
Prior Park Road	Initial monitoring complete.	<p>Neo Traffic Data using one automatic tube counter for a 7-day period in July 2021.</p> <p>Singular diffusion tube air quality monitoring.</p>	Awaiting analysis.	<p>The post-CAZ NO₂ concentration at Prior Park Road measured at 23 µg/m³ in June 2021 compared to 30 µg/m³ in 2019.</p> <p>For context, the annual average NO₂ level in 2019 at this location was 35 µg/m³.</p>	Awaiting results of analysis.

Area for investigation	Status	Monitoring undertaken	Traffic monitoring results	Air quality monitoring results	Next steps
Penn Hill Road	Initial monitoring in progress.	<p>One temporary radar automatic traffic counter deployed in August 2021 for a 7-day period.</p> <p>Singular diffusion tube air quality monitoring.</p>	Awaiting analysis.	<p>The nearest available monitoring site from Penn Hill Road was Weston High Street. The NO₂ concentration at this location in June 2021 was 19 µg/m³.</p>	Awaiting results of analysis.
Englishcombe Lane	Initial monitoring scheduled.	<p>Two temporary radar automatic traffic counters to be deployed in September 2021 for a period of 7-days.</p> <p>Singular diffusion tube air quality monitoring.</p>	Awaiting analysis.	<p>The post-CAZ NO₂ concentration at Englishcombe Lane measured at 10 µg/m³ in June 2021 compared to 12 µg/m³ in June 2019.</p> <p>For context, the 2019 annual average at this location was 14 µg/m³.</p>	Awaiting results from analysis.

