

## Bath & North East Somerset Council

MEETING:	Cabinet		
MEETING DATE:	14 <sup>th</sup> July 2022	EXECUTIVE FORWARD PLAN REFERENCE:	
		E	3339
TITLE:	Bath Clean Air Plan Annual Report 2021		
WARD:	All		
<b>AN OPEN PUBLIC ITEM</b>			
<b>List of attachments to this report:</b> <a href="#">Appendix (a)- Summary of Bath's Clean Air Plan Annual Report 2021</a> <a href="#">Appendix (b)-Bath's Clean Air Zone Annual Report 2021</a> <a href="#">Appendix (b) 1- Measuring the impact (reporting timeline)</a> <a href="#">Appendix (b) 2- Investigating traffic displacement concerns</a> <a href="#">Appendix (b) 3- Full 2021 annual diffusion tube NO<sub>2</sub> data</a>			

### 1 THE ISSUE

- 1.1 Poor air quality is the largest known environmental risk to public health in the UK. Investing in cleaner air and doing more to tackle air pollution are priorities for the UK government, as well as for Bath and North East Somerset Council (B&NES). B&NES has monitored and endeavoured to address air quality in Bath, and the wider B&NES area, since 2002. Despite this, Bath has ongoing exceedances of the legal limits for nitrogen dioxide (NO<sub>2</sub>), and these were predicted to continue until 2025 without intervention.
- 1.2 To achieve compliance with Ministerial Directions, on 15 March 2021 a Clean Air Zone was launched in Bath, the first charging CAZ outside of London.
- 1.3 This report reviews the performance of the first calendar year of the Clean Air Zone (CAZ) in Bath from 15 March 2021- 31 December 2021.

## **2 RECOMMENDATIONS**

The Cabinet is asked to:

- 2.1 Note the Annual report and the ongoing progress which has been made towards achieving reductions in nitrogen dioxide levels both within and on the boundary of the CAZ, which has been realised by the scheme increasing the proportion of compliant, less polluting vehicles driving in and around the city.
- 2.2 Note the continued performance of the CAZ against the scheme's financial model, ensuring it covers its costs of operation and avoids placing an additional burden on the Council and local taxpayers. In addition, note that surplus revenue is now being targeted towards sustainable transport projects as laid out in the full business case for the scheme.
- 2.3 Note the statement from the Joint Air Quality Unit (JAQU) on their assessment of the scheme towards achieving success with the Ministerial Directions which have been served upon the council.
- 2.4 In line with recommendation 3 of E3322 and Minute 1.5 of E3326, note that further work to develop and implement a local nitrogen dioxide objective level be continued.
- 2.5 Recommend that officers explore options for enhancing the capability to monitor particulate matter pollution within Bath and North East Somerset.

## **3 THE REPORT**

- 3.1 The Annual Report is attached at Appendix (b) and provides a detailed summary of the performance of the CAZ between 15 March 2021-31<sup>st</sup> December 2021. The key headlines and messages are summarised in the Summary of the Annual Report attached at Appendix (a).

Compared with 2019 (our pre-Covid baseline year) the following achievements are noted:

- a decreasing trend in NO<sub>2</sub> concentrations at all sites in Bath
  - a 21% reduction in annual mean NO<sub>2</sub> concentrations within the zone
  - a 22% reduction in annual mean NO<sub>2</sub> concentrations in the urban area outside the zone, demonstrating that air quality has not deteriorated in these areas due to the introduction of the CAZ
  - 8 fewer sites exceeding the limit value of 40 µg/m<sup>3</sup> (as an annual mean).
- 3.2 3 sites recorded an annual average NO<sub>2</sub> concentration greater than 40 µg/m<sup>3</sup> which were at Walcot Parade, Wells Road and Dorchester Street. However, all these sites have an overall decreasing trend in concentrations and plans are being developed for local interventions to lower concentrations further.

- 3.3 Significant progress has been achieved in increasing the proportion of compliant vehicles that are entering the zone on a daily basis- on average in March 2021, 1,146 vehicles driven in the zone each day were non-compliant and chargeable. By December 2021, this number had halved to 550.
- 3.4 All chargeable vehicle categories are now exceeding compliance rates of 90%, apart from vans which, from a starting percentage of 63%, are now achieving a rate of 80% compliance.
- 3.5 The Annual Report also considers other measures such as retail footfall rates, which provide indications of both potentially positive and adverse impacts of the scheme. In the case of retail footfall, by the end of 2021 rates have returned to near pre-pandemic figures suggesting that the CAZ has not negatively impacted this measure.
- 3.6 The performance of the Bath Clean Air Plan is being closely scrutinised by the JAQU in collaboration with Ipsos UK and the Institute for Transport Studies (ITS) at the University of Leeds. In May 2022 a Central Evaluation Report was published on the impact of Local NO<sub>2</sub> Plans which provided insight on the first 6 months of data from the operation of the scheme (March 2021- October 2021) and other live schemes. Accepting that this is a very early-stage analysis, the report supports our local findings and key points are:
- NO<sub>2</sub> levels in Bath have decreased since the CAZ was implemented. Taking into account COVID restrictions and the Cleveland Bridge closure, alongside an analysis of air quality in comparable locations, the suggestion is that the observed improved air quality can be partially attributed to the CAZ introduction.
  - Evidence suggests that the CAZ has been successful in encouraging the enhancement of vehicle compliance. While COVID is the main driver for the observed fluctuations in the volume of traffic in the CAZ area in Bath, an analysis of the composition of the fleet driving into the CAZ area highlights a clear move toward compliant vehicles across all vehicle types.
  - A comparison between air quality data in the B&NES CAZ and that in control sites in Reading, Oxford and Worthing suggests that improvements in air quality in Bath may be causally related to the B&NES CAZ. However, a longer time series of quality assured measurements is needed to improve the confidence and certainty of this conclusion.
- 3.7 During the development of the Full Business Case, traffic modelling did suggest that there could be both increases and decreases in traffic flows on some roads because of the CAZ being introduced. However, it could not anticipate the changes in national and local traffic patterns because of the pandemic. The pandemic has greatly affected working habits and travel patterns since the winter of 2019/2020 with greater visibility of delivery vehicles on the road network. Appendix (b) 2 of the Annual report provides updated information on how concerns about the potential displacement of traffic and pollution have been investigated since the launch of the scheme, which has involved the deployment of temporary ANPR cameras to better understand the proportion of non-compliant traffic in areas of concern.

Of the 17 initial investigations, 7 locations have been determined as having no displacement impacts, 2 locations will be reviewed following the full re-opening of Cleveland Bridge, 2 locations have further monitoring in progress and 6 locations require ongoing monitoring at this stage.

- 3.8 To date, this monitoring suggests that there are no ongoing significant displacement impacts due to the introduction of the scheme, however monitoring will continue. This will include monitoring on key roads such as the A37, where results to date demonstrate that there appears to be no increase in HGV volumes due to the implementation of the CAZ.
- 3.9 The financial assistance scheme to bring forward replacement of non-compliant vehicles or provide retrofit treatments to vehicles has been successful; by the end of December 2021, some 722 vehicles had been upgraded with the Council's support and by the end of May 2022, this had increased to 859 vehicles. The current round of funding for the financial assistance scheme has now concluded and consideration is being given as how residual funding could be allocated to those on a secondary waiting list and those who continue to receive time-limited exemptions from the scheme which are due to expire in March 2023.
- 3.10 The Charging Order, which provides the legal framework for the scheme, requires that in the first place any surplus revenue should be used to cover the cost of operation of the scheme, including the maintenance of infrastructure and operational staff. After the first year, the operational and future costs of the scheme are now covered, and any surplus revenue is being allocated to sustainable transport initiatives. £2.5M will be allocated to the City Region Sustainable Transport Fund over the next 2 years.
- 3.11 There is no clear evidence of a safe level of exposure to NO<sub>2</sub> or particulate matter or below which there is no risk of adverse health effects so any further reduction of these pollutant concentrations below air quality standards is likely to bring additional health benefits<sup>1</sup>. To date, efforts have been directed at achieving compliance with the Ministerial Directions which focus on reducing concentrations of NO<sub>2</sub>. The council wants to be ambitious in building upon the progress which has been made by the CAZ in improving air quality throughout the city and its environs and has a will to go further.
- 3.12 Whilst the aim has been to achieve compliance with the annual average objective level for of 40 µgm<sup>3</sup>, the council is fully aware of World Health Organisation (WHO) guidelines published in 2021 which propose more ambitious targets for both NO<sub>2</sub> and particulate matter in recognition of the serious health risk pollution can have upon global health. It is ambitious to create its own reducing target to adhere to these guidelines in future years, reinforcing the aspiration that reducing pollution should be an aim in all decision-making.
- 3.13 By introducing a local NO<sub>2</sub> objective level for example, where all monitoring locations would aim to achieve an annual average level of at, or below, 36 µgm<sup>3</sup> by 2025, it demonstrates a will to be aspirational in further protecting public health. This local target would align with the wider package of measures detailed in the Journey to Net Zero to achieve decarbonisation,

1. Public Health England. Air Quality: A Briefing for Directors of Public Health, 2017

including consideration of the introduction of a work-place parking levy and additional residents parking zones.

- 3.14 Whilst current objective levels for particulate matter are not being breached in Bath and North East Somerset, the council would like to increase the monitoring capacity of this pollutant using surplus funding from the CAZ. Unlike NO<sub>2</sub>, particulate matter is a pollutant which can be significantly impacted by regional factors, i.e. sources outside of the local authority and the council aspires to provide the public with wider coverage of actual monitoring data to raise greater awareness of this important pollutant.

#### **4 STATUTORY CONSIDERATIONS**

- 4.1 The Council has received a total of three separate Ministerial Directions throughout the development of the scheme, the effect of which is that the Council must fulfil its statutory duty to achieve compliance with air quality standards in the shortest possible time and by 2021 at the latest. Following the launch of the scheme on 15 March 2021 and despite the challenges posed by the pandemic and temporary changes to traffic flows within the city caused by the Cleveland Bridge restoration works, officers have continued to work hard to achieve this legal requirement.

- 4.2 The formal assessment by JAQU as to whether the Council has 'achieved success' with the Ministerial Directions is currently being completed. JAQU have provided the following points of information:

- JAQU understands that local monitoring shows that Bath is making good progress towards achieving legal compliance for Nitrogen Dioxide levels.
- JAQU is currently assessing the evidence that they have collected which will be independently reviewed.
- A report summarising JAQU's assessment of this evidence will be published in the autumn alongside assessments of other Local Authorities' plans.

- 4.3 Achieving compliance with air quality standards across Bath and the wider North East Somerset area will result in widespread public health improvements and compliments the wider projects around decarbonisation and promoting more sustainable methods of travel.

- 4.4 The Council has a public sector equality duty to have due regard to the need to (in summary) eliminate discrimination, advance equality of opportunity, and foster good relations between people who share a relevant protected characteristic and those who do not. An Equalities Impact Assessment (EqIA) was drafted in September 2018 so that the Council could fulfil this duty and has been subsequently reviewed on several occasions, including around the launch of the scheme. The latest review did not identify any adverse impacts and the latest version (recently updated) can be found here: <https://beta.bathnes.gov.uk/policy-and-documents-library/clean-air-zone-equality-impact-assessment>

## 5 RESOURCE IMPLICATIONS (FINANCE, PROPERTY, PEOPLE)

- 5.1 The aim of the CAZ charging scheme is to reduce dangerous levels of NO<sub>2</sub> in the shortest time possible through encouraging and embedding behaviour change. Any income is secondary to this aim, as the ongoing payment of zone entry charges and penalty charge notices is indicative that the necessary behaviour change is still required.
- 5.2 The scheme has been set up using grant funding from central government so there is no additional burden on the Council and local taxpayers.
- 5.3 Revenue grant funding to implement the scheme in advance of the receipt of any surplus income (the Implementation Fund monies) or as part of mitigating the impact of the scheme (the Clean Air Fund monies), has been allocated as shown in the table below. (The dates of 31 December 2021 and 31 May 2021 have been chosen to reflect the monitoring periods required by JAQU):

	Grant allocation (£)	Amount spent to 31 Dec 2021 (£)	Amount spent 01 Jan 2022- 31 May 2022 (£)	Remaining committed funding
Implementation Fund	2,067,938	1,716,038	351,900	0
Clean Air Fund	1,226,548	762,920	288,245	175,383

- 5.4 The remaining committed funding of £175,383 from the Clean Air Fund relates primarily to the e-cargo delivery project. Additionally, the values in the table above do not include additional 'stretch-funding' of £0.280M of Clean Air Fund funding i.e., further funding which can be sought if the need can be demonstrated.
- 5.5 Capital funding received from central government to implement the scheme (the Implementation Fund monies) or as part of mitigating the impact of the scheme (the Clean Air Fund monies) has been allocated as shown in the table below. (The dates of 31 December 2021 and 31 May 2021 have been chosen to reflect the monitoring periods required by JAQU):

	Grant allocation (£)	Amount spent to 31 Dec 2021 (£)	Amount spent 01 Jan 2022-31 May 2022 (£)	Remaining committed funding (£)
Implementation Fund	6,250,000	4,831,975	65,980	1,352,045
Clean Air Fund-Bus Retrofit Scheme	1,743,000	1,528,671	109,274	105,055
Clean Air Fund-Financial Assistance Scheme	6,970,870	4,951,890	1,541,047	477,933
Clean Air fund-E-Cargo Bike Delivery Scheme	250,000	0	0	250,000
Total	15,213,870	11,312,536	1,716,302	2,185,032

- 5.6 The values in the table above do not include additional 'stretch-funding' of up to £2.630M for the Financial Assistance Scheme and up to £0.150M for the E-Cargo Bike Delivery Scheme i.e., i.e., further funding which can be sought if the need can be demonstrated.
- 5.7 Once capital grant funding is fully spent, all further Clean Air Zone capital spend must be covered from surplus income received.
- 5.8 Between launch and 31 May 2022 (which includes two months of soft enforcement during which only the zone entry charge was recovered), the scheme has recorded the following income and operational costs:

	Zone entry charges (£)	PCN's (£)	Other income (£)	Total (£)
Income to 31.05.2022	3.116m	3.650m	0.005m	6.771m
Costs to 31.05.2022				3.798m
Net surplus				2.973m

- 5.9 The team continue to take a common-sense approach to enforcement, reinforcing the scheme's purpose to improve air quality by engendering behaviour change.
- 5.10 Any net surplus from the Clean Air Zone scheme is retained in a ring-fenced reserve to fund future operating costs and cover decommissioning costs. At the end of the 21/22 financial year, future committed costs of the scheme are now fully covered, and surpluses are being allocated to the reinvestment reserve. £2.5M of funding from the reinvestment reserve has been allocated to the CRSTS (City Region Sustainable Transport Settlement), and current projections show that this commitment will be covered from this reserve.
- 5.11 The budgets for both zone entry charge income and penalty charge income were modelled on a worst-case scenario basis and assumed that any income from the scheme would not be received before July 2021 for zone entry charge income, and September 2021 for penalty charge income, to accommodate the risk of potential legal challenges and other factors.
- 5.12 The operating costs over the 10 yr. life of the scheme are forecasted to be £15.2M. So far, grants received, and income raised total £7.6M leaving £7.6M to be funded from future income and the smoothing and decommissioning reserves.

## **6 RISK MANAGEMENT**

- 6.1 A risk assessment for the project has been undertaken, in compliance with the Council's decision-making risk management guidance. Specific information can be found in the Quantifiable Risk Assessment as part of the Full Business Case at <https://www.bathnes.gov.uk/bath-breathes-2021-overview/full-business-case>
- 6.2 The remaining key risk relates to uncertainty about delivering compliance in the shortest time and the Council awaits the outcome of the formal assessment from the JAQU to understand progress in achieving this. As ongoing mitigation of this risk, officers continue to focus on key locations to understand how fleet composition and drier behaviour could have both positive and detrimental impacts on NO<sub>2</sub> levels.
- 6.3 The delivery and success of the CAZ has a range of interdependencies with national, sub-regional and local stakeholders and statutory bodies, whose activities, programmes, and policies could have significant implications on the delivery of air quality compliance in the shortest possible time in Bath and North East Somerset. All relationships with these bodies continue to be monitored by the Project Team and reported to the Project Board.
- 6.4 It should be reiterated that if at any point revenue enforcement income and associated government grant income did not cover costs, any shortfall would ultimately need to be underwritten by the government's Joint Air Quality Unit (JAQU). Eventually, if income fell in the medium term, this would mean compliance, or success, has been gained and running costs would correspondingly be reduced to mitigate any adverse impact. It has been recognised that Government will honour the burden created following the new burdens principle (subject to the test of the burden being reasonable).



6.5 The costs of the scheme continue to be monitored, reviewed, and managed within available income and reports will be made to the Project Board on a regular basis.

6.6 The s.151 Officer and the Monitoring Officer continue to be involved in the monitoring of the scheme and have signed this report off for publication.

## 7 CLIMATE CHANGE

7.1 The Council declared a Climate Emergency in March 2019, committing it to providing the leadership necessary to enable Bath and North East Somerset to achieve carbon neutrality by 2030.

7.2 The CAZ represents a catalyst for other projects which support the Journey to Net Zero agenda and by encouraging owners and operators to replace older diesel and petrol powertrains with newer diesel, petrol, hybrid, or alternatively fuelled powertrains, should help reduce vehicle-related CO2 emissions, in line with the Council's local transport policies and climate emergency declaration.

## 8 OTHER OPTIONS CONSIDERED

8.1 None. This is a report providing an annual update on the performance of the CAZ in Bath.

## 9 CONSULTATION

9.1 Consultation has been carried out with the Council's senior responsible officers, S151 and Monitoring Officers, Director of Place Management, as well as the Cabinet Member for Climate Emergency and Sustainability.

<b>Contact person</b>	<i>Chris Major, Director of Place Management 01225 394231</i> <i>Cathryn Brown, CAZ Manager 01225 477645</i>
<b>Background papers</b>	<i>Documents published on the Council's website, including the Full Business Case and the Equalities Impact Assessment and the previous Quarterly Performance Reports:</i>  <a href="https://beta.bathnes.gov.uk/policy-and-documents-library/baths-clean-air-zone">https://beta.bathnes.gov.uk/policy-and-documents-library/baths-clean-air-zone</a>  <a href="https://beta.bathnes.gov.uk/policy-and-documents-library/clean-air-zone-equality-impact-assessment">https://beta.bathnes.gov.uk/policy-and-documents-library/clean-air-zone-equality-impact-assessment</a>  <a href="https://beta.bathnes.gov.uk/policy-and-documents-library/baths-clean-air-zone-monitoring-reports">https://beta.bathnes.gov.uk/policy-and-documents-library/baths-clean-air-zone-monitoring-reports</a>
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