

**To:** Scrutiny Committee  
**Date:** 6 October 2020  
**Report of:** Transition Director Tim Sadler  
**Title of Report:** Annual Air Quality Status Report

<b>Summary and recommendations</b>	
<b>Purpose of report:</b>	Provide overview of the Annual Air Quality Status Report
<b>Key decision:</b>	No
<b>Cabinet Member with responsibility:</b>	Councillor Tom Hayes, Deputy Leader; Cabinet Member for Green Transport and Zero Carbon Oxford
<b>Corporate Priority:</b>	None
<b>Policy Framework:</b>	None
<b>Recommendation(s): That the Committee resolves to:</b>	
1. Note the report.	

<b>Appendices</b>	
Appendix 1	Air Quality Annual Status Report 2019

## Introduction and background

1. Oxford City Council has a statutory duty to submit an Air Quality Annual Status Report to Defra annually to report on air quality in the preceding calendar year. The reports are published on the Council's website annually.
2. The report provides an overview of all monitoring data for the year and provides an update against actions sets out in the councils Air Quality Action Plan.

## Report findings

3. The Annual Status Report 2019 outlines the result of air quality monitoring undertaken across the city of Oxford in 2019. Data for a full year of monitoring is required in order to report on the annual mean and Oxford City Council annually

publishes all air quality data on its website as well as on <https://oxfordshire.air-quality.info/>

4. Oxford City Council currently operates an air quality monitoring network that consist of a total of 71 sites using passive monitoring (diffusion tubes) and three sites using automatic (continuous) monitoring.
5. Historical analysis of our air quality data shows that NO<sub>2</sub> levels have significantly improved over the period 2009-2019 in the city of Oxford. Over this period, we have seen declines of 29% in NO<sub>2</sub>, 21% in Particulate Matter (PM<sub>10</sub>) and 18% in Particulate Matter (PM<sub>2.5</sub>) in the places where air quality is being monitored.
6. The majority of the reductions observed over the above period have to do mainly with significant changes in traffic emissions. The introduction of a Low Emission Zone (LEZ) for buses in the city in 2014 and the retrofit of several buses to cleaner Euro VI engines (which achieve an estimated 99.5% reduction in NO<sub>x</sub> emissions compared to Euro V) have contributed to these improvements. However, air quality monitoring results from the most recent years have shown that the rate of these reductions seems to be slowing down. In many cases, air quality levels seem to have plateaued in the city, suggesting that more robust actions to tackle air quality in the city are required.
7. Results from the air quality monitoring conducted during 2019 indicate overall increases of NO<sub>2</sub> levels in the majority of monitoring locations in the city. Across the 64 sites where NO<sub>2</sub> was monitored in both 2018 and 2019, 70% showed increases of air quality levels; 16% measured the same levels as the previous year and only 9% showed slight decreases in NO<sub>2</sub> values.
8. A quarter of sites (24.4%) saw increases of only of 1 µg/m<sup>3</sup>, which is within the margin of error of the monitoring method. This means that the NO<sub>2</sub> increase measured at those locations in 2019 cannot be considered statistically significant. However, the majority of sites (51.1%) saw increases of between 2-3 µg/m<sup>3</sup>; which were observed at 23 locations across the city. The remaining sites (24.4%) saw increases between 4-6 µg/m<sup>3</sup> which is considered significant and this was observed at most of the city's air pollution hotspots and in locations of the city where air pollution has been historically high.
9. In order to understand the cause of the increase in pollution level a detailed analysis of the 2019 air quality monitoring data was undertaken. This analysis indicates that the observed NO<sub>2</sub> increase was related to the effect of weather, rather than to specific increases due to traffic and/or congestion.
10. If the overall 2-3 µg/m<sup>3</sup> increase of the NO<sub>2</sub> annual mean values attributed to weather were not to be accounted for in 2019 air quality data, air pollution levels in Oxford would have shown the same NO<sub>2</sub> plateauing trend that was observed in 2018.
11. Six locations in the city showed exceedances of the annual mean legal limit value for NO<sub>2</sub> in 2019. This represents an increase of two sites when compared with the previous year, but down from a total of 17 sites just five years ago.
12. The 2019 monitoring results also show that there were no exceedances of the UK limit values as well as of the WHO recommended guidelines for Particulate Matter (PM<sub>2.5</sub> and PM<sub>10</sub>) and Ozone (O<sub>3</sub>) in all the locations where these pollutants were measured.

13. Despite the clear impacts of weather on air pollution in 2019, the fact is that in real terms air pollution was higher than in the year before. We therefore need continued action to reduce our emissions from transport, homes and industry. We need to ensure that air quality levels continue to reduce significantly throughout the city, and that Oxford's air is not just cleaner, but safer to breathe. As such, in March 2020, Oxford City Council, and Oxfordshire County Council published updated proposals for a Zero Emission Zone (ZEZ) in Oxford city centre. The ZEZ aims to tackle Oxford's air pollution and protect the health of everyone who lives in, works in and visits the city.
14. There were seven new locations where air pollution was monitored in 2019: Old Abingdon Road, Hollow Way road, Cowley Road/Union Street, Summertown Parade, Woodstock Road, Botley Road and St Clements (Three). None of these seven locations experienced exceedances of the annual mean limit value for NO<sub>2</sub>.

### **Actions to Improve Air Quality**

15. Oxford's Air Quality Action Plan (AQAP) focusses on measures the City Council has the ability to address, but includes measures that we can influence, or work in partnership with others to deliver. Effective action require co-operation from all sectors including transport, construction, business and commerce, and daily choices made by every single transport user. Oxford's AQAP recognises that the City Council cannot act in isolation in order to deliver a comprehensive package of measures without engagement and delivery from a wide range of stakeholders.
16. The following are actions that Oxford City Council has already taken to improve air quality in the city:
  - a. Secured £150,000 from the Department for Environment, Food, and Rural Affairs (DEFRA) Air Quality Fund for the delivery of a low-cost mobile Automated Number Plate Recognition (ANPR) enforcement system to be implemented and trialled as part of the first phase of the Oxford's Zero Emission Zone ([link to press release](#));
  - b. Delivered a feasibility study, several public consultations and in March 2020 updated final proposals for the introduction of a Zero Emission Zone (ZEZ) in Oxford city centre, following 27 months of listening to businesses, residents, transport operators and health experts in Oxfordshire. Due to the COVID-19 outbreak, the proposed ZEZ (which was expected to be launched in December 2020), will now launch in summer 2021. The ZEZ will be based on a road user charging scheme where Zero emission vehicles will be able to drive in the zone free of charge. The ZEZ is delivered in partnership between Oxfordshire County Council and Oxford City Council ([link to press release](#));
  - c. Announced in January 2020, and in partnership with Oxfordshire County Council - "[Connecting Oxford](#)": a package of traffic measures to tackle congestion and the poor public transport connections into and across Oxford which involve the implementation of new traffic restrictions and a workplace parking levy. The generated revenue will be used for investment into new and improved bus routes and new and improved walking and cycling routes across the city. Future steps involve developing a detailed business case as well as modelling, design and a comprehensive engagement programme with a wide range of stakeholders and resident groups across the city. ([link to press release](#));

- d. Secured £128,500 from the Department for Environment, Food and Rural Affairs (DEFRA) Air Quality Fund for the testing of low cost innovative Air Quality sensors to map air pollution and human exposure in Oxford. This project is being delivered in partnership with local group [Ox-Air \(link to press release\)](#);
- e. Secured £122,500 from DEFRA Air Quality Fund for the development of a robust, integrated communication and engagement plan, to inform and work with businesses in the city centre on how to adopt zero emission delivery and servicing solutions for their business. A dedicated Zero emission Officer has joined the team in January 2020 to specifically deliver this project ([link to press release](#));
- f. Secured £10 million from central Government as part of a £41 million project for the development of an innovative new Energy Super hub project in Oxford (ESO), to cut carbon emissions and improve air quality in the city. The project involves the installation of a giant battery, allowing spare capacity to be fed into a new high capacity electric supply. This will power thousands of electric vehicle's via rapid charging stations to enable migration of full fleets to electric vehicles. The project will also deliver 320 heat pump installation, that will be rolled out across the city and provide low cost carbon heating to homes. In 2019 Planning permission was granted for the installation of the giant battery at a local National Grid substation and it's expected to 'go live' in Winter 20/21. Planning is in progress for a new high capacity electric wire, running around the East and West part of Oxford. The City Council has also recently placed orders for a further 27 electric vehicles, including cars, vans, sweeper and a JCB. ( [link to press release](#) ; [link to project's website](#));
- g. Held a workshop in February 2020 at the town hall with 62 people, representing County, District and Parish Councils, major employers and sustainable travel advocacy groups to present and discuss Oxford Greenways Project – Oxford City Council, Oxfordshire County Council and the University of Oxford's commitment to fund a concept master plan for a new network of cycling and walking routes into Oxford, to be achieved within 18 months ([link to press release](#));
- h. In January 2019, Oxford City Council members unanimously declared a climate emergency and agreed to create a citizens assembly in Oxford to help consider new carbon targets and additional measures to reduce emissions. In April, Members set a vision to reduce the City Council's own emissions to net-zero by 2030 at the latest ([link to press release](#));
- i. Hosted, during the weekends of 28<sup>th</sup>-29<sup>th</sup> September and 19<sup>th</sup>-20<sup>th</sup> October 2019 a Citizens Assembly on Climate Change, which involved a randomly-selected representative sample of 50 Oxford residents who learned about climate change and explored different options to cut carbon emissions through a combination of presentations from experts and facilitated workshops. Oxford was the first city in the UK to deliver a full citizens assembly on the topic of climate change ([link to press release](#));
- j. Secured £2.3million from the Clean Bus Technology fund (CBTF) for the retrofit of 5 buses to fully electric and 115 to euro VI standard, with expected NO<sub>2</sub> savings of 5.5 tonnes/year and a total of 27.6 tonnes over the lifetime of

- the project ([link to press release](#)) - The euro VI retrofitting plan is now nearly finished, and the first new EV bus is in operation in the city since March 2020
- k. Secured nearly £200,000 from DEFRA's Air Quality Fund for the purchase of electric delivery vehicles and installation of charging points to address the specific issue of Covered Market deliveries, to help retailers get ready for the introduction of the Zero Emission Zone to be introduced progressively across the city centre from 2020 ([link to press release](#)).
  - l. Created new emission standards for Hackney Carriage Vehicles, which will see Hackney taxis adopting a phased approach to zero-emission capable vehicles between 2020 and 2025, with drivers only able to get a licence in 2025 if they have a zero-emission capable cab. The new standards were developed in consultation with City of Oxford Licensed Taxi Association (COLTA) and with feedback from taxi drivers and owners ([link to press release](#));
  - m. Co-organised (in association with Green TV) and delivered the second Electric Vehicle summit in Oxford. The event took place at the Saïd Business School in Oxford, on 26<sup>th</sup> and 27<sup>th</sup> June 2019 and brought together key figures in the electric vehicles and EV charging markets. The summit was focused on dual themes of business development and thought leadership ([link to press release](#));
  - n. Co-organised (in association with Green TV) and delivered the first Electric Bike summit in Oxford. The event took place at Oxford University's Wolfson College on 10<sup>th</sup> April 2019, bringing together industry players and business leaders from cycling bodies, cycle manufacturers, the retail sector, investors and the public sector, with the aim to create a business forum to propel the business of e-Bike mobility ([link to press release](#));
  - o. Launched in January 2020 as part of the [award-winning](#) STOP project, an Air Quality Banner competition, in partnership with local Friends of the Earth, for children in school years three to six across Oxford. The competition will include a children's winning artwork in the design of a 3m x 1m banner to be displayed at primary school entrances, with the objective to raise awareness about the links between air pollution and health and to promote sustainable modes of transport, such as walking and cycling;
  - p. A new charter for cleaner air was been launched by Oxford City Council, Greenpeace UK, and Friends of the Earth. The charter, which was created by Oxford City Council, is believed to be the first formal cooperation with Greenpeace UK and Friends of the Earth (EWNI) (England, Wales and Northern Ireland) to be led by a local authority. ([link to charter](#));
  - q. Oxford City Council attended and supported National Clean Air Summit organised by UK100 and hosted by Mayor of London Sadiq Khan which included meetings with ministers to discuss the current clean air crisis;
  - r. Hosted Birmingham and Nottingham to share knowledge between UK cities and facilitate partnership work across the UK;
  - s. Launched an educational toolkit for primary and secondary schools in Oxford, which provides science teachers with a range of interactive activities, based both in the classroom and outdoors, to raise awareness about the causes and impacts of air pollution ([link to press release](#));

- t. Launched, a city wide anti-idling campaign in partnership with Friends of the Earth called 'Oxford Air Needs Your Care', particularly focused on tackling vehicles idling around schools during drop off and pick up times ([link to Anti-Idling campaign](#));
- u. Published Air Quality Planning Application Guidance, in recognition that one of the ways to reduce air pollution effectively is through efficient use of the planning system. The new guidance is aimed at creating a better understanding of the air quality requirements that need to be considered by applicants prior to the submission of a valid planning proposal, and is available for download at Oxford City Council's Air Quality [website](#);
- v. Worked in collaboration with Oxfordshire County Council Public Health, and Oxford Health respiratory nurses and physios working in the Integrated Respiratory Team project of Churchill's Hospital in Oxford, to explore ways to provide better Air Quality communication and advice for Chronic Obstructive Pulmonary Disease (COPD) patients;
- w. Launched the Go Ultra Low Oxford project (GULO), with the aim of increasing uptake of ultra-low emission vehicles through support for individuals and provision of enabling infrastructure ([link to press release](#));
- x. Launched a project for the provision of 19 electric vehicle charging points for the use of hackney carriages and private hire taxis in the city. The scheme also includes an investigation of the business case for investment in ultra-low emissions taxis based on local Oxford duty-cycles; ([link to press release](#));
- y. Participated in several DEFRA webinars, including one as main speaker, where we shared our experience of introducing and implementing a Low Emission Zone for the city with DEFRA and other local authorities, to inform consideration of the most appropriate mechanism for establishing newly proposed Clean Air Zones (CAZ);
- z. Supported and run "Test Drive the Future" events to introduce the public to a range of electric vehicles (EVs) and the financial and environmental benefits of going electric. The events provide an opportunity to test drive vehicles, and outline the options for driving an electric car 'pay as you go' through one of Oxford's car clubs ([link to press release](#));
- aa. Created an Air Quality steering group with members from Oxford City Council, Oxfordshire County Council and relevant Councillors with the objective of specifically address the problem of poor air quality around St Clements in Oxford ([link to press release](#));
- bb. Developed a set of air quality stickers placed at all monitoring locations, with relevant AQ information and direct link to Oxfordshire's air quality website, in order to improve communication around air quality with members of the public;
- cc. Launched the Schools Tackling Oxford's Air Pollution (STOP) Project, which provides real-time NO<sub>2</sub> and PM<sub>10</sub> air quality monitors in 6 schools. The project was awarded the [Communications Initiative of the Year](#) at the National Air Quality Awards 2018 ([link to press release](#));
- dd. Declared the whole of the city an Air Quality Management Area for NO<sub>2</sub>;
- ee. Developed an Air Quality Action Plan and Low Emission Strategy for the city;

- ff. Introduced the first extensive Low Emission Zone (LEZ) outside of London. This won the prize for Local Authority Air Quality Initiative of the Year at the National Air Quality Awards 2015 ([link to press release](#));
- gg. Launched the Oxfordshire Air Quality website to make historic and real time air quality data more readily accessible to members of the public;
- hh. Increased the number of diffusion tube monitoring locations in the city by nearly 50% from January 2015 – we now monitor air quality in 71 locations around the city;
- ii. Launched Oxford Park and Pedal which has seen over 100 cycle parking spaces introduced at two of our park and ride sites;
- jj. Engaged with the Oxfordshire Health Improvement Board to ensure that air quality is considered in the context of the Joint Strategic Needs Assessment (JSNA);
- kk. Continued to seek opportunities to work in partnership with neighbouring District Councils through participation in the Oxfordshire Air Quality Group.

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**Background Papers:** None

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