



Report to: Licensing and Environmental Health Committee, 13th December 2021

Report of: Corporate Director – Operations, Homes and Communities

Subject: ANNUAL AIR QUALITY UPDATE REPORT 2021

1. Recommendation

That Committee -

1.1 Notes the contents of this report, and in particular the imminent commencement of source apportionment investigation at key locations within the City

1.2 Notes the progress made against the Air Quality Task & Finish Group Recommendations

2. Background

2.1 Under the Environment Act 1995, local authorities have a duty to review and assess air quality within their areas and where breaches of the National Objective for a pollutant exist, work towards improving air quality. National Objectives for pollutants are set by European Directives and translated into UK legislation. Where an objective is consistently breached an Air Quality Management Area (AQMA) must be declared.

2.2 In Worcester the only recorded breaches are that of the National Objective for the Annual Average of Nitrogen Dioxide (NO₂). Any measures that improve nitrogen dioxide levels will also contribute to reductions of traffic related Particulate Matter which have the greatest link to adverse health outcomes.

3. Information

Short term Monitoring

3.1 Worcester City Council undertook non-automatic (passive) monitoring of NO₂ at 37 sites during 2020. No exceedance of the long-term objective for NO₂ was recorded in 2020, with all locations recording 10% or more below the air quality objective (AQO) for NO₂.

3.2 Monitoring data from 2020 does not represent a standard year with the emergence of the Covid-19 Pandemic and first lockdown in March and subsequent lockdowns that followed. With the number of vehicle journeys significantly reduced much lower concentrations of nitrogen dioxide have been recorded in all locations compared to previous years.

3.3 On average the recorded concentrations in 2020 have decreased by 22.4% (7µg/m³) when compared with 2019 results. Monitoring results demonstrate decreases in NO₂

at all monitored locations across the district between 2019 and 2020, consistent with trends across Worcestershire.

- 3.4 Given the above it is considered more appropriate to compare the bias adjusted 2019 results with 2017 data which demonstrates a downward trend at 21 monitoring locations, averaging $1.56\mu\text{g}/\text{m}^3$ reduction. However 14 monitoring locations demonstrated an increase of on average $0.83\mu\text{g}/\text{m}^3$ increase. Overall the results indicate an average decrease of $0.60\mu\text{g}/\text{m}^3$ and a 1.90% reduction from 2017 data.
- 3.5 During September 2021 traffic volumes returned to pre Covid levels which allowed a return to source apportionment work for critical areas of the city. Source apportionment is where the traffic in a particular location is reviewed in terms of volume and vehicle make up. Traffic counts are therefore due to commence during late 2021.
- 3.6 The source apportionment work will identify which form of vehicles contribute to the most pollution in each location. This is not just based on the type of vehicle undertaking most movements in that location, as some vehicle types such as HGVs contribute greater levels of pollution than others so a calculation is required to be made. The information from this process will then inform the further development of the council's Air Quality Action Plan (AQAP) following the City wide declaration in June 2019.

Long term Monitoring

- 3.7 Notwithstanding the above WRS also undertook a long-term trend analysis of air quality reviewing all of the passive monitoring taking place over the last 20 years in a number of locations in the city and have concluded that the long-term trends can be seen to be decreasing. This is largely due to changes in vehicle technology, with the number of cleaner, less polluting vehicles increasing within the fleet, as traffic levels have remained constant or increased over the years. It may also be due to environmental factors such as milder, wetter winters, as pollutant concentrations are influenced by climatic conditions.
- 3.8 It is clear from the available monitoring data however that the results from three out of the four most recent years are much lower than would be anticipated. 2020 is obviously greatly reduced due to the impacts from the Covid-19 pandemic and subsequent lockdowns greatly reducing vehicle movements. 2017 and 2019 also recorded lower concentrations due to a relatively low bias adjustment factor being issued for the laboratory by Defra. These factors combined has the potential to skew the long-term trend results and provide a picture that concentrations are reducing more significantly than may be the case.
- 3.9 To account for this, and to provide a more objective view of results, WRS have carried out analysis utilising two scenarios. One using the full dataset and the other using the same data but with the results from 2017, 2019, and 2020 removed to provide a more robust worst-case projection. This provides a comparison of the data with actual concentrations likely to sit within these two points.
- 3.10 Whilst concentrations of NO_2 can be seen to be decreasing over time it is considered that exceedances of the air quality objective will continue to be recorded across the City's monitoring network in future years.
- 3.11 This direction of travel is an encouraging sign but it would be sensible not to over rely on fleet makeup as the only method of air quality improvement as these changes are

slow, marginal and can be naturally reversed should Worcester experience unfavourable metrological conditions over a winter period.

- 3.12 It is recommended that in line with existing strategies such as the Worcester City Council Environmental Sustainability Strategy to encourage modal change for transport and to promote clean methods of transport which should be a key focus in any future Air Quality Action Plan.

Progress with Air Quality Task & Finish Group Recommendations

- 3.13 As reported at a previous Committee the Annual Air Quality Update Report will also be utilised to formally feedback on progress with the Air Quality Task & Finish Group Recommendations.
- 3.14 **Recommendation 1 – ‘Considering Air Quality Impacts when Taking Decisions’:** As reported at a previous Committee this recommendation is considered to have been completed. Air Quality is a material consideration across a number of areas of Council business. There are the formal considerations of air quality when assessing and determining planning applications and this is led on by Worcestershire Regulatory Services (WRS). There are also a number of regulatory mechanisms WRS enforce on our behalf in respect of air quality and pollution control.
- 3.15 More informally the Council’s decision report format requires any report seeking a decision to have taken into account environmental considerations which would include air quality. Report authors have guidance that encourages this approach, and all reports are subject to scrutiny by senior management, Corporate Leadership Team and ultimately Members via Committees and Council.
- 3.16 This Annual Air Quality Report plays its part in setting the scene for the Council to scrutinise decisions particularly around spatial planning, capital investment and environmental strategy etc.
- 3.17 **Recommendation 2 – ‘Consider feasibility of Electric Vehicle Charging Infrastructure for Streets’:** This recommendation is considered to be ‘In Progress’ although it should be noted that Worcestershire County Council have direct influence and ability to implement such a project.
- 3.18 In July 2021 the Council received an evidence report that had been commissioned to identify some of the key information that was required to better understand the need and challenge around ‘on street’ EV charging infrastructure.
- 3.19 The key headlines of the report were as follows –
- Approximately 1/3 of households (14,846) in Worcester do not have off street parking provision
 - Of the above properties without off street parking provision, 10% are located within 5 minutes’ walk of a public charge point
 - There are forecast to be 7,600 electric vehicles licensed in Worcester by 2031. There are currently 812 electric vehicles licensed which is slightly ahead of forecast (this number not expected until mid 2022/2023)
 - At the end of Q2 2019/2020 there were 173 electric vehicles licensed in Worcester compared to 812 at the end of Q2 2021/2022, an increase of 369%

- Based on the forecasted number of electric vehicles then circa 420 public E charge points would be required. There are currently around 35 public EV charge points in Worcester
 - Public EV charge points will not just be required for domestic vehicles but also for those who are required to charge their work vehicles at home
- 3.20 Members will be aware that at a recent Worcestershire County Council meeting in September The Cabinet Member for Highways & Transport agreed to look into the Council's options for delivering such infrastructure whilst highlighting some of the challenges associated with such projects in areas with a lack of off-street parking.
- 3.21 Pending this further work being carried out by Worcestershire County Council, it is this Council's intention to utilise the data that has been gathered through the evidence report and share this with colleagues within Highways and Public Health so that opportunities to increase EV charging infrastructure are focussed on the right communities and looks at not only 'on-street' options but also utilising car parks, other public land and private land that is accessible to the public etc
- 3.22 It is worth noting that on 28th September 2021 the Government consulted on 'Future of transport regulatory review: zero emission vehicles', acknowledging that "*EV infrastructure is particularly important for the 8 million households who cannot install a home chargepoint*". Feedback was sought on 4 themes –
- Statutory obligation to plan for and deliver a charging infrastructure
 - Chargepoints in non-residential car parks
 - Making the Rapid Charging Fund
 - Improving the experience for electric vehicle consumers
- 3.23 **Recommendation 3 – 'Consider air quality around future proposals for car parking':** In recent months the Council's Environment Committee approved a report that enabled consultation to take place in respect of a single Consolidated 'Off-Street' Car Parking Order for Worcester City Council Car Parks. This order proposes that the new electric vehicle charging bays at St Martins Gate Car Park will be operated on the basis of a competitive market tariff for electric to encourage uptake. Furthermore for the rapid charging points it is proposed that no parking fee will be payable for a maximum 1 hour stay.
- 3.24 This has had a positive impact and between 4th October 2021 – 7th November 2021 the charge points have recorded 613 charging sessions utilised by 340 unique users. 31 users have charged 4 or more times and there has been 1 occasion when all charge points were in active use simultaneously. 15,000 kWh has been consumed which translates into 44,341 miles travelled.
- 3.25 Discussions are underway with a local chargepoint manufacturer which is looking to research and better understand the habits of EV drivers, about provision of destination chargepoints in two City Council owned car parks. Subject to necessary consultation and approval it would be prudent again to encourage uptake of such infrastructure through incentivisation.
- 3.26 At this present time and in order to support the economic recovery of Worcester and in particular the City Centre there are no proposals to introduce a pricing structure

that penalises people from parking in certain locations over others. It is important in order to support economic recovery that we are providing safe, good quality and affordable parking provision whilst recognising the need to cater for the growing number of electric vehicles through increasing EV charging infrastructure.

- 3.27 Recommendation 3 in reality should be ongoing and is very much linked to recommendation 1 and air quality needing to be considered as part of taking decisions.
- 3.28 **Recommendation 4 – ‘Investigate feasibility of procuring and operating ULEV pool cars’:** This recommendation is considered to be closed. An assessment undertaken by officers prior to the COVID Pandemic confirmed that as an organisation we generated very little grey fleet mileage (employee-owned vehicles, bought with their own money and reimbursed on a pence per mile basis). This is linked in the main to our City being geographically compact and in addition our Environmental Health & Licensing function (traditionally heavy mileage users) being carried out by Worcestershire Regulatory Services.
- 3.29 Discussion with a national fleet company quickly confirmed that it would not be cost effective for us to operate a pool car model given the low levels of miles being generated and the risk of leased pool cars sitting idle and underutilised.
- 3.30 Work continues however to electrify the Council’s own fleet of vehicles and as of the date of this report 8 vehicles we operate are fully electric. These include 5 small vans, 1 people carrier, 1 x 3.5t tipper van and 1 3.5t box van. Our Waste & Recycling Manager is also actively tracking the progress being made on electric Refuse Collection Vehicles with a view to taking one on trial at some point in the future.
- 3.31 **Recommendation 5 – ‘Investigate feasibility and impact of imposing an emission standard for taxi’s’:** This recommendation is considered to be closed. This Committee will be aware of the previous ‘Taxi Strategy’ Task & Finish Group that investigated emission standards for taxi’s including electric vehicles.
- 3.32 This investigation found that the vast majority of petrol vehicles on the taxi fleet (Hackney & Private Hire) were of an age that enabled them to meet the EURO 4 emission standard, this being the highest standard for a petrol vehicle. In respect of diesel taxi’s, the majority of vehicles were of an age that enabled them to meet the EURO 6 emission standard, this being the highest standard for a diesel vehicle. One of the recommendations of the group was for the Council’s Taxi Policy to be amended so that all new applications would need to meet both standards without fail.
- 3.33 In respect of electric vehicles then it was clear from conversations with taxi trade representatives that there were many challenges in moving to electric and although financial incentivisation would be helpful this would not unlock the challenges around charging infrastructure, fast pace of innovation around electric vehicles and residual value of existing vehicles. It was therefore decided to engage the trade in understanding these challenges better.
- 3.34 **Recommendation 6 – ‘Draft a low emission strategy to include all recommendations above’:** This recommendation is considered to be ‘In Progress’. As reported at a previous Committee there is some concern over what was intended to be produced by way of a low emission strategy.
- 3.35 A Low Emission Strategy provides a package of measures to help mitigate the transport impacts of development. The primary aim is to accelerate the uptake of low emission fuels and technologies in and around a development site. Low emission

strategies complement other design and mitigation options, such as travel planning and the provision of public transport infrastructure. Strategies are often secured through a combination of planning conditions and legal obligations. They may incorporate policy measures and/or require financial investments in and contributions to the delivery of low emission transport projects and plans, including strategic monitoring and assessment activities.

- 3.36 Officers intend to revisit this recommendation with the Chair and Vice Chair of both this Committee and Environment Committee to rescope what it is the Council can and wants to influence and its links to the Councils Environmental Sustainability Strategy. One consideration is whether as a Council would we be better pursuing an electric vehicle strategy now the Government have provided clarity over the sale of electric and vehicle cars ending in 2030?
- 3.37 In summary therefore, of the 6 recommendations it is considered that 1, 4 and 5 have been completed, 2 and 6 remain in progress and 3 is deemed as ongoing and business as usual.
- 3.38 As discussed previously further updates will be provided to Members via briefing notes, Committee updates and via the Annual Air Quality Update Report received by this Committee each year.

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Background Papers: N/A