

EASTLEIGH LOCAL AREA COMMITTEE

Tuesday, 14 September 2021

AIR QUALITY UPDATE

Report of the Senior Pollution Control Officer

Recommendations

It is recommended that the Eastleigh Local Area Committee note:

- (1) the final air quality measurements for Eastleigh in 2020; and**
 - (2) progress made against the Air Quality Action Plan.**
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Summary

This report provides an update to the Eastleigh Local Area Committee (ELAC) on the state of air quality and progress in implementing the Eastleigh Borough Council Air Quality Action Plan. Final annual averages for 2020 are presented alongside reporting on progress against the Air Quality Action Plan measures, which covers the period to the beginning of August 2021.

Statutory Powers

Environment Act 1995 Part IV Section 83(2)

The Air Quality Standards Regulations 2010

Strategic Implications

1. The causes and consequences of poor air quality, and the action needed to tackle it, relate to many of the Council's corporate objectives: Health and Wellbeing, Environment, Economy and Housing. While this issue cuts across portfolios, the lead is taken by the Cabinet member for Transport as part of the Council's 'Tackling Congestion' objective. This recognises that many interventions relate to Transport, and interventions designed to reduce congestion will often also improve air quality.
2. European and national statutory air quality duties derive from negative impacts on health and wellbeing, especially for the very young and old and people with existing health conditions, even at pollution levels lower than statutory exceedance levels.

Introduction

3. Air Quality Management Areas (AQMAs) must be declared where pollutant concentrations are found to be at risk of exceeding national objective levels, which are shown in Appendix 2. Once declared, AQMAs must have an associated Air Quality Action Plan (AQAP) which contains measures aiming to bring levels of air pollution under the objective values.
4. The four AQMAs in Eastleigh Borough are covered by the Borough-wide AQAP 2020 – 2025 which was adopted in February 2020. Two of these are located in the Eastleigh Local Area, Eastleigh AQMA No. 1 (A335) in the centre and Eastleigh AQMA No. 2 (M3) passing through the south west and bordering the western boundary (see Appendix 1 for map). They were both declared due to a risk of exceedance of the annual objective for nitrogen dioxide (NO₂).

Air Quality Monitoring Results

5. Monitoring across the Eastleigh Local Area is carried out by two principle methods:
 - Diffusion tubes measure NO₂ and provide monthly values.
 - Three continuous monitoring stations measure NO₂ with higher accuracy and time resolution, allowing them to show changes as they happen during the course of the day. Particulate matter (PM) is also measured at one of these stations.
6. Finalised air quality monitoring data for 2020 is presented in Appendix 2. Results have been impacted by restrictions imposed in response to the Covid-19 pandemic, both in terms of the Council's ability to collect samples and in concentrations being atypical compared to previous years. Continuous monitoring results have been verified through independent data ratification by Imperial College London. Diffusion tube readings have been analysed and treated in accordance with guidance provided by the Department for

Environment, Food & Rural Affairs (DEFRA). The data in Appendix 2 includes short explanations for any data gaps seen which expand on this further.

7. An issue with the monitoring cabinet at Southampton Road has resulted in the loss of over 4 months of data for 2020 at this location. After a leak which occurred during heavy rainfall in August 2020, the monitoring equipment was removed to be dried and inspected for damage. While no problems were identified, the equipment was not reinstalled until the cabinet could be replaced as a repeat of this incident would have the potential to cause extensive damage. Data from this site has been annualised when calculating the annual average, in line with guidance provided by DEFRA.
8. Levels of NO₂ show no exceedances of the annual average objective level in 2020, with all measurements significantly below this which provides further confidence that the objective level was not exceeded in this year. In the AQMAs, all sites showed a significant drop in measured concentrations when compared to average levels over the previous four years. This reduction was up to 30% in some locations and at many sites the change from 2019 to 2020 was larger than any other year on year reduction recorded. It should be noted however, that sustained compliance must be demonstrated before we would consider that the target has been met. Year to year variability in measurements is expected and usually five years of results consistently below the objective are required before an AQMA is considered for revocation. DEFRA guidance relating specifically to the reporting of 2020 data highlights the additional uncertainties involved in results due to the Covid-19 pandemic, advising that caution should be taken when using 2020 to assess long term trends. Results shown are presented with this caveat and while they support the overall falling trend which has already been observed, it should be noted that this is likely to have been exaggerated by the effects of Covid-19 restrictions.

Air Quality Action Plan

9. Progress against each of the ELAC relevant actions in the Borough-wide AQAP is shown in Appendix 3, with some of these discussed in more detail below.
10. Monitoring has been deployed in Campbell Road, requested as a location of community concern, to complete the first targeted diffusion tube study in ELAC. Results are included in Appendix 4 and do not indicate that there is a risk of objective levels for NO₂ being exceeded in these locations. Applying the bias adjustment for 2020 to this data the highest monthly reading across both study sites was 26.1µg/m³, and the average levels at both sites across the study period shown were below 18µg/m³. This is less than half of the annual objective level of 40µg/m³, providing some confidence that the annual objective would not be exceeded. Data for the same time period is shown for existing locations on Campbell Road and Southampton Road for comparison: here the averages were significantly higher at 27.3µg/m³ and 31.7µg/m³ respectively. This confirms the placement of these existing tubes as representing a worst case scenario in this area. The extra tubes are currently

still installed but will be moved to the next study area when this has been identified.

11. The DEFRA funded low cost monitoring project has been expanded and now includes five locations focussed around the Station Hill roundabout and one co-location site at Steele Close. Simultaneous air quality and traffic movement data has been collected at each of these locations since the beginning of 2021 and is currently being reviewed and analysed to establish the best way to use it. Some examples of information collected so far is shown in Appendix 5. The locations correspond closely with other survey work and diffusion tube sites, so information collected from all monitoring types will feed into our work in the area. This project officially ended in May 2021 and a final project report detailing the project outcomes will be produced by the end of the year. DEFRA have approved a maintenance period for the project, which means the remaining funding can be used after the project end to continue to operate the equipment. This will allow a bigger dataset to be built up and for any issues that arise from monitoring over longer time periods to be investigated.
12. The source apportionment study, for which funding was granted by ELAC, was carried out in February 2021. The key findings which relate to ELAC are summarised below, with supporting data shown in Appendix 6.
 - a. In comparison to national predictions, a higher proportion of Light Goods Vehicles (LGVs) were seen in Eastleigh.
 - b. When the cars were split by fuel type, a smaller proportion of fully electric cars were recorded compared to both national predictions and the other survey locations in Bursledon.
 - c. Cars and LGVs in Eastleigh tend to be older compared to national predictions, with a significantly lower percentage of the most recent EURO VI vehicles seen.
 - d. The biggest contributors to roadside NO_x at the survey locations are cars and LGVs with diesel EURO V engines. This is likely to be a combination of these vehicles being old enough not to benefit from the improvements seen into EURO VI, which are significant, but new enough that a large number are still in use.
 - e. Contribution to NO_x from Heavy Goods Vehicles (HGVs) was found to be lower than previously thought.
 - f. A specific issue with older buses was noted at the Wide Lane survey location, where EURO IV buses were found to have the largest contribution to NO_x even though only 12 of these were recorded during the study period.

The scope of the study was extensive, and while the main outcomes have been summarised here further information will be made available in the full report. The findings will feed into action prioritisation, predictions for the

expected impact of actions and the understanding of the specific local situation in ELAC. Any implications on the AQAP will be considered and results will be incorporated into the next AQAP review. In the future there is the potential to expand on this work, for example by commissioning our own models using the local factors calculated.

13. The pedestrianisation of the town centre was carried out as part of the Council's Covid-19 response, aimed at providing a Covid-safe environment for visitors to the town centre. Associated benefits included encouraging active travel and resulting in fewer vehicles driving to the area. The schemes was initially extended with the temporary Traffic Regulation Order in place until 15 December 2021, but was kept under regular review. Public feedback was generally positive and in a consultation run by Hampshire County Council in February/March 2021 58% of respondents supported retaining the closure for up to 18 months. However, the County Council were unable to support its continuation beyond the lifting of social distancing measures and as a result, the pedestrianisation was removed in July 2021. The Council will continue to assess the trial, explore options and work with the County Council on a longer-term plan for the area.
14. A further DEFRA funded project is aimed at reducing emissions, in particular of particulate matter, from domestic burning through provision of information and engagement with the public on the relevant issues. An external contractor was appointed to run the campaign, which launched in November 2020 and involves regular promotion of messages across a range of platforms. It is regularly refreshed and kept up to date with the most relevant information, for example promoting the change in the Domestic Solid Fuel Standards Regulations in May 2021 and a focus on bonfires during the summer months. Examples of recent materials used as part of the campaign are shown in Appendix 7. Activities in Eastleigh include messaging on social media, the Council website, newsletters and through the delivery of 3337 leaflets in targeted post codes. The contractor has also carried out direct engagements with relevant companies and groups including stove installers, community groups and charities. The project is in conjunction with three neighbouring authorities which provides consistency for residents across a wider area. With these same partners a successful bid was entered into a further round of funding to extend both the timescale and the scope of this project.

Financial Implications

15. Funding sources for individual actions are shown in the table in Appendix 3 and include grant applications and Section 106 Agreements as well as existing budgets and available resource.
16. Any actions identified in the new AQAP that require additional funding for delivery will be taken to the relevant Local Area Committee (LAC) or Cabinet for approval. Where possible Eastleigh Borough Council will work in partnership to deliver these and will take every opportunity to secure additional funding that is made available through grant funds or securing developers contributions from Section 106 Agreements.

Risk Assessment

17. The AQAP will ensure that the Council takes a managed approach to air quality by identifying the most effective actions and targeting priority locations. Progress against the AQAP will be reported annually and the actions reviewed and updated when necessary to ensure they remain relevant to Council priorities and activities.

Equality and Diversity Implications

18. The Equality Act is relevant to the decision in this report as it relates to addressing an issue that, although it has an impact on all residents, can disproportionately affect the most vulnerable in society such as children, people with health issues and areas of social deprivation. An Equality Impact Assessment (EqIA) has been carried out and was submitted with the AQAP. In summary the EqIA shows that the Council has made efforts to engage those groups which are most affected by poor air quality and taken into account their concerns as part of the development of the plan. The aim of the AQAP is to improve air quality across the Borough, this will benefit everyone but particularly those groups which air pollution has the biggest impact upon. In this way, the AQAP is working to reduce inequality and adverse impacts on vulnerable groups.

Climate Change and Environmental Implications

19. The AQAP supports work in the Climate and Environmental Emergency Strategy and Action Plan and many actions are relevant to both areas of work.
20. The AQAP aims to improve air quality across the Borough, particularly in local areas where air quality does not meet national objective levels. Poor air quality has significant impact on the local environment and public health and in many cases air quality improvements are also positive for climate change. Conflicts can arise however, where action in one area has a detrimental effect on the other, therefore it's important to consider how to achieve the maximum benefit. In this way the AQAP will contribute towards the environmental targets set out in the Climate and Environmental Emergency Strategy.

Conclusion

21. This report provides an update on monitoring for the Eastleigh Area, including final results for 2020.
22. Eastleigh Borough Council continues to work towards delivering improvements in air quality and the AQAP sets the Council's programme of work for this.

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Appendices Attached:

- 1- AQMA & Sampling Point Map
- 2- 2020 Air quality data for ELAC
- 3- Progress against AQAP measures
- 4- Air quality data for Campbell Road study
- 5- Example data from the DEFRA low cost monitoring project
- 6- ELAC Source Apportionment Study
- 7- Example materials from the DEFRA solid fuel burning project

LOCAL GOVERNMENT ACT 1972 - SECTION 100D

The following is a list of documents which disclose facts or matters on which this report or an important part of it is based and have been relied upon to a material extent in the preparation of this report. This list does not include any published works or documents which would disclose exempt or confidential information.

* Background Papers: None.