Air Quality Annual Statement Report 2022 - Contaminated Land Officer (Lucy Hawkings)

#### Synopsis of report:

To inform Members that Runnymede Borough Council's 2022 (for the period of 2020-2021) Air Quality Annual Status Report (ASR) was submitted to the Department for Environment, Food & Rural Affairs (Defra) and to have a discussion on air quality within Runnymede and outline of measures to improve it.

#### Recommendation:

The Committee receive and note the 2022 Air Quality Annual Status Report (ASR) and note the ongoing actions regarding Air Quality.

## 1. Context of report

1.1 This report provides Members with updated Air Quality information in the form of Runnymede's 2022 ASR which has now been submitted to Defra. The report covers monitoring carried out in the year of 2020 – 2021.

## 2. Report

- 2.1 This report fulfils Runnymede's obligations with respect to managing the Air Quality Management Areas (AQMAs) within Runnymede's area and reporting on the general air quality within the Borough.
- 2.2 Whilst there is a requirement for local authorities to submit their ASRs to Defra every June Members are made aware that due to the effects of Covid and the lack of staffing, the 2022 ASR covers years, 2020-2021 (meeting the 2022 June submission requirement). The next ASR submission date is June 2023 for the period of 2021-2022.
- 2.3 Whilst there is a requirement for local authorities to submit their ASRs to Defra in June, Members are made aware that, as is the case for a number of local authorities, the RBC submission occurs after that date as Officers seek to apply the 'bias correction factor' once it is finally published in the Autumn.
- 2.4 Runnymede's monitoring capability is totally reliant on diffusion tubes to monitor the air quality within the Borough. Diffusion tubes are a relatively inexpensive way to monitor for nitrogen dioxide however their accuracy must be corrected at the end of each year. This adjustment process is called bias correction. Bias correction data is created by having similar diffusion tubes to those used in Runnymede located next to very accurate continuous nitrogen dioxide monitors (located in other parts of the country), data from which can be used by Defra to determine what adjustment factor must be applied to the diffusion tubes in order calibrate them against the accurate monitors. These determinations are posted, at different times through the year, on Defra's national bias correction website.

- 2.5 Over the last 20 years Runnymede has seen a large variation in the bias correction factors which have been applied to the diffusion tube results. The range of the bias correction factor is from 0.83 to 1.28. By way of example, if the annual level from the diffusion tubes indicated a nitrogen dioxide reading of 31.3 ug/m3 (with 40ug/m3 being the national standard above which the Council would need to consider declaring an area as an AQMA), then applying a bias correction of 1.28 to 31.3ug/m3 would produce a result of nitrogen dioxide levels being greater than 40 ug/m3. Hence it can be shown that having a 28% correction factor plays a very significant part in the final determination.
- 2.6 To ensure that the correct bias correction figure has been applied, the monitoring data in the Runnymede Borough Council annual status report is presented 6 months to one year in arrears.

## 3. Report findings

- 3.1 Nitrogen dioxide is the main air pollutant of concern within the Borough as there are small areas within the Borough where the level of nitrogen dioxide levels exceed or are close to prescribed objectives. The levels of nitrogen dioxide are in the main generated by vehicular transport and problems can occur in areas with high volumes of traffic.
- 3.2 The Borough has generally seen a slow decline in nitrogen dioxide levels across the Borough over the period that the Council has been monitoring the levels of nitrogen dioxide with some notable exceptions. When directly comparing the nitrogen dioxide levels of 2019 to 2021, the air quality situation within the Borough has overall seen an improvement in air quality year on year in so much that in 2021 there was only one exceedance, and five monitors out of 33 that reported values within 10% of the objective value.

## 4. Overall Conclusion

- 4.1 Due to Covid, 2021 was a difficult year to quantify, with implications on travelling.
- 4.2 In addition to the high-level national programmes policies and initiatives that are seeking to reduce levels of emissions there is a joint working approach through the efforts of the Surrey Air Alliance in such areas as schools air quality projects. Runnymede Borough Council have also joined the Air Alert scheme which provides a valuable service to vulnerable people about poor air quality days.

## 4.3 Current AQMAs

There are two Air Quality Management Areas (AQMAs) in Runnymede Borough Council for exceedances of the annual mean nitrogen dioxide objective.

## M25 and Egham extension

It had been noted from the 2019 ASR that the levels of nitrogen dioxide within this area had been falling, however, in 2019 it was discovered that the levels of nitrogen dioxide had risen back up to almost the objective level, hence the consideration of removing this area from the AQMA was postponed. However, in 2020 it has been discovered that in this Covid hit year the levels have fallen and so should these current levels be maintained next year then further consideration

will be made to revoking this extended AQMA. In 2021, the concentration remained below the objective, but there remained some uncertainty due to Covid-19. Further consideration will be made next year to revoking this extended AQMA, should levels continue to remain below the objective.

#### Addlestone

The general trend indicates a decrease in nitrogen dioxide concentrations, to below objective levels, at locations that are located on the roads leading up to the actual 4-way junction, however the area immediately adjacent to the traffic light controlled junction at the centre of the AQMA, continues to indicate a level above the air quality objective. In 2021, the concentration was  $41.0 \ \mu g/m3$ . It appears that because of the congested nature of traffic flow and the high sided building close to the road then it is proving difficult to obtain any improvements in air quality and since the problem relates specifically to road transport and highway issues then it is suggested that SCC should further consider highway improvements to this area in order to seek to achieve a reduction in nitrogen dioxide level produced by traffic on the highway.

#### 4.4 Investigation for a potential AQMA at Chertsey

At a busy roadside junction controlled by traffic lights in Chertsey it has been shown that there were exceedances in the air quality objective at the kerbside, however once all the necessary correction factors had been applied then the levels at the closest residential facades were within the objective limits. The Council is attempting to keep a "watching brief" at this location however in 2018 there had been a spate of missing diffusion tubes. As a result, measures were taken such as moving some of the monitors closer to the highway and to a less prominent position then it appears that these measures have helped in providing more reliable returns of the diffusion tubes. For 2021 it is again discovered that at the facades of residential properties within the area, after making the appropriate adjustments for bias and distance, the level of nitrogen dioxide is close to the prescribed objective level and hence the determination is that this area will remain under the "watching brief".

In March 2023 RBC commissioned a Dispersion Modelling Study into the Chertsey area to ascertain if a full detailed assessment is needed with a view to a potential AQMA declaration in the area. This study suggests an exceedance of the annual mean NO2 Air quality objective (AQO) at 11 residential properties along Bridge Road. Predicted concentration at the road façade of several residential properties elsewhere on Bridge Road and on Weir Road were below the AQO, but within 90% of the AQO (i.e., above 36 µg/m3). The need for an AQMA in Bridge Road/Weir Road should be confirmed using the 2022 monitoring data once the bias adjustment factor is published by DEFRA. If the 2022 monitoring data shows exceedances of the annual mean NO2 AQO, it is recommended that an AQMA should be declared. A further modelling assessment of this area is recommended to understand whether the proposed AQMA should be increased in size to include this area.

## 4.5 Particulate Matter (PM)

In 2021 the World Health Organization published new Air Quality Guidelines (AQG) which concludes there are health effects at much lower concentrations than their 2005 AQG suggested, and no safe limit for fine Particulate Matter (PM2.5). The Environment Act 2021 requires the Secretary of State to set a long-term target to

reduce people's exposure to PM2.5. The Government was legally bound to bring forward the PM2.5 target by the 31st October 2022. This has been delayed until sometime in 2023.

Consultants were instructed at the beginning of 2023 who will obtain a baseline review of PM sources in the Borough. Once sources and risks had been identified, an action plan will be produced and a monitoring strategy prepared, this would include a review of where PM monitoring would be most beneficial. This approach would also ensure Runnymede was ready for any change in the legislation. For PM2.5 there is no low-cost measurement method equivalent to diffusion tubes. Historically only expensive instruments have been available for measuring this pollutant, and therefore, there is relatively little PM2.5 data available. There are several potential monitoring surveys that could be adopted, which will be considered in full.

Consideration of how to improve air quality have been included in the Council's approved Air Quality Action Plan 2018 (currently under revision) and this includes a raft of measures such as consideration for planning applications within or near the Borough's AQMAs as per the Supplementary Planning Document (SPD) recently produced as part of the Local Plan. The SPD contains guidance on when an air quality impact assessment is required to be submitted with a planning application, as well as the information which should be covered within the assessments.

## 5. Resource Implications

1.1 Additional funding via the Contain Outbreak Management Fund (COMF) is currently being used to develop the service and update the AQAP, complete the detailed assessment of potential Chertsey AQMA and to explore our potential additional responsibilities for particulate monitoring pending publication of the government's guidance.

# 6. Legal Implications

6.1 There is an obligation to provide Defra with an annual status report on air quality. This has been achieved.

# 7 Equality Implications

There are no Equality Implications arising from this report.

## 8 Environmental implications

8.1 Nitrogen dioxide levels within the Borough continue to fluctuate and in some places are in decline resulting in a negative impact for the local environment and for resident's health.

# 9 Conclusion

(To resolve)

## **Background papers**

ASR report is at Appendix 'A' and available in the Member's Room and online at https://www.runnymede.gov.uk/airquality