

BOROUGH OF KETTERING

Committee	MONITORING AND AUDIT	Item A3	Page 1 of 6
Report Originator	Head of Public Services – Shirley Plenderleith	<i>Fwd Plan Ref No:</i>	
Wards Affected	All	25 th November 2020	
Title	Air Quality Monitoring and Electric Vehicle Charging Points		

1. PURPOSE OF REPORT

- 1.1 The purpose of this report is to provide an overview of the air quality issues in Kettering Borough Council's administrative area and to update on the progress with electric vehicle charging points.

2. INFORMATION

- 2.1 Local authorities in the UK have a statutory duty to manage local air quality under Part IV of the Environment Act 1995.
- 2.2 They are required to carry out regular reviews and assessments of air quality in their area, against standards and objectives prescribed in regulations for the purpose of local air quality management (LAQM).
- 2.3 Part IV of the Environment Act 1995 places a duty on local authorities to review and assess the air quality within their area in accordance with Government Guidance, Defra Technical Guidance LAQM.TG (16).
- 2.4 Local authorities must review air quality locally on an annual basis and report progress against any air quality action plan relating to Air Quality Management Areas (AQMAs) in their district.
- 2.5 The Report identifies if there is a breach of the national Air Quality Objectives (AQOs). If there is a breach, then there is a need to consider further assessment, which could lead to the declaration of an Air Quality Management Area.
- 2.6 The national AQO's are set out at 2.9.
- 2.7 AQOs are based on the best available medical and scientific understanding of the effect of the specified pollutants on public health (from recommendations by the Expert Panel on Air Quality Standards, The European Union Air Quality Daughter Directive and the World Health Organisation). As scientific research and understanding of the health effects of these pollutants have developed, the Objectives have been progressively refined and strengthened.
- 2.8 The Regulations make it clear that the Air Quality Objectives are in relation to **relevant exposure**, i.e. applicable in locations where people are likely to be regularly present and exposed for the appropriate time period of the Objective.

2.9 National AQO's:

Pollutant	Air Quality Objective	
	Concentration	Measured as
Benzene	16.25 µg/m ³	Running annual mean
	5.00 µg/m ³	Annual mean
1,3-Butadiene	2.25 µg/m ³	Running annual mean
Carbon monoxide	10 mg/m ³	Running 8-hour mean
Lead	0.50 µg/m ³	Annual mean
	0.25 µg/m ³	Annual mean
Nitrogen dioxide	200 µg/m ³ not to be exceeded more than 18 times a year	1-hour mean
	40 µg/m ³	Annual mean
Particulate Matter (PM ₁₀) (gravimetric)	50 µg/m ³ , not to be exceeded more than 35 times a year	24-hour mean
	40 µg/m ³	Annual mean
Sulphur dioxide	350 µg/m ³ , not to be exceeded more than 24 times a year	1-hour mean
	125 µg/m ³ , not to be exceeded more than 3 times a year	24-hour mean
	266 µg/m ³ , not to be exceeded more than 35 times a year	15-minute mean

2.10 These are defined within the Environment Act 1995 for the annual mean as “all locations where members of the public might be regularly exposed, e.g. building facades of residential properties, schools, hospitals, libraries etc.”.

2.11 For the one-hour Objectives, it also includes kerbside sites (e.g. pavements of busy shopping streets) and outdoor locations to which the public might reasonably expect to spend one hour or longer.

2.12 Determining where we should be monitoring is dependent on a number of considerations, as specified in national guidance Local Air Quality Management

Technical Guidance TG16, as summarised below. Locations are kept under regular review.

Road Traffic Sources	<ul style="list-style-type: none"> • Narrow congested streets with residential properties close to the kerb. • Busy streets where people may spend one hour or more close to traffic. • Roads with a high flow of buses and/or HGVs. • Busy junctions with receptors within 10 metres of the kerb. • New roads constructed since the last Updating and Screening Assessment. • Roads with significantly changed traffic flows; and • Bus or coach stations
Other transport sources	For example, airports or shipping ports
Industrial sources	For example, new or proposed installations, substantially increased emissions or petrol stations
Commercial and domestic sources	For example, biomass combustion
New developments with fugitive or uncontrolled sources	For example, new landfills or quarries.

2.13 The Council has engaged air quality experts to review existing sites, along with sites suggested by members of this committee (following a report on the subject in February 2020).

2.14 A copy of the review is included in the background papers. The results of the review have been actioned to ensure our monitoring network is fit for purpose.

2.15 Over progressive years, the number of monitoring sites have been increased across the Borough as shown in the table below:

	2017	2018	2019	2020
Number of diffusion tubes	9	17	38	39

2019 Annual Status Report (ASR) and data collection

2.16 The current ASR reviews the data captured for the calendar year 2019, therefore the drop in traffic related to the COVID-19 pandemic is not captured in this data. It will feature within the 2021 ASR.

It incorporates the data collected from diffusion tubes located at monitoring sites across the Borough. In 2019, nitrogen dioxide was measured at 38 locations across the Borough, using diffusion tubes.

2.17 The diffusion tubes are collected and replaced every four to five weeks by officers from the Environmental Protection (EP) Team. The schedule for collection is set annually by DEFRA.

2.18 Once collected, the diffusion tubes are sent for analysis, with the laboratory e-mailing the results to officers. The EP team collate this information following the return of the results from the laboratory.

There is a short delay in collection and submission of data before results are available, for example, usually the results of the diffusion tubes for December are not received until February.

2.19 The Council then must wait for DEFRA to publish the national bias adjustment factor to enable the data from the diffusion tubes to be finalised. This may not be received by the Council until part way into the year.

2.20 Once in receipt of the formula, the ASR then needs to be completed and submitted to DEFRA by the end of June.

2.21 DEFRA then provide comments to the Council on the report, usually around August to September. We can then respond to these comments and, if deemed necessary, revisions to the ASR are made by agreement.

2.22 Overall, concentrations of annual mean nitrogen dioxide in 2019 have fallen from 2018. This supports documents published by multiple sources concluding that air quality is improving year on year, due to the uptake of less-polluting vehicles and demand for more renewable energy.

2.23 Within the Borough there is only one pollutant, nitrogen dioxide, that presents anywhere near the national objective level. The two areas that have previously been the highest nitrogen dioxide levels are the London Road/ St Mary's Road junction in Kettering and Bridge Street in Rothwell.

Both areas have seen further drops in the level of nitrogen dioxide recorded with levels at the nearest receptor for the London Road/ St Mary's Road junction now down to 34.7mg/m³ and Bridge Street in Rothwell down to 31.7 mg/m³.

2.24 The one site that has been recorded above the national objective of 40mg/m³ is located on the High Street in Rothwell where 42mg/m³ was recorded.

This monitoring site is in a street canyon very close to the road edge, which may elevate pollutant concentrations. However, monitoring at this location only commenced in June 2019, and the annualised exceedance is only just over the national objective.

2.25 Further monitoring is taking place in 2020 to provide additional data to decide on the appropriate future steps for this area.

2.26 The Council's ASR has been assessed by DEFRA and they have commented that they are satisfied with the report, its contents, and the ongoing monitoring and review of the newly identified hotspot area of NO₂.

Actions to Improve Air Quality

2.27 In order to encourage residents and visitors to assist us in our aim to improve air quality and respond to climate change, the Council have secured funding from

the Office of Low Emission Vehicles (OLEV) to install electric vehicle (EV) charging points in a number of Council car parks:

- London Road
- Commercial Road
- School Lane

The funding provides 75% of the cost with the other 25% being provided through Section 106 monies.

- 2.28 The charging points installation had been delayed due to the COVID-19 pandemic, but the four bays in each of London Road, Commercial Road and School Lane car parks have been fully operational since September 2020.
- 2.29 The Council has been engaging in the County Council's VPACH project that is looking at on street charging points. After providing a number of suggestions, the County Council have undertaken a review of 82 sites across Burton Latimer, Desborough, Rothwell and Kettering.
- 2.30 Of these sites, 64 were rejected due to location requirements, 9 were rejected for commercial reasons and 6 were rejected following public consultation on proposed sites.
- 2.31 This leaves 3 sites that are due to be installed in December 2020. The sites are located on Telford Way, Linnell Way and Clarence Road.
- 2.32 Changes to the traffic system in Kettering over the last five years have helped improve junctions and traffic flow leading to a reduction in concentrations, for example the introduction of two-way traffic in Eskdail St which has reduced pressure on other junctions. We continue to work with the County Council and partners to improve the flow of traffic and this should be made even easier as we move into a Unitary authority
- 2.33 There has also been improvement of cycling infrastructure with the cycle lane in St Marys Road and cycle parking. We continue to work with the County Council and partners to improve provision.

3. CONSULTATION AND CUSTOMER IMPACT

- 3.1 Should we need to declare an AQMA at any point into the future, before doing so there would need to be a consultation process. It would include residents, businesses and interested parties in the area concerned. The Council's partners, such as the County Council transport, planning, public health teams and any AQAP would also be subject to consultation.

4. POLICY AND RESOURCE IMPLICATIONS

- 4.1 The need to reduce air pollution and improve health falls under the Council's obligations under the Public Health Indicator Framework (PHOF), as well as the primary legislation outlined above.

The monitoring and modelling work being undertaken will help to ensure that traffic management is effective and pollution levels are not worsened by changes made. Any improvements to air pollution will also improve health.

- 4.2 The motion passed by Council relating to Climate Change is relevant as many of the actions proposed will help to address climate change and air quality.
- 4.3 Traffic management also supports other mitigation options, such as the provision of electric vehicle charging points in the Borough, to reduce dependency on fossil fuel cars.
- 4.4 The EV charging points have been 75% funded by OLEV with the remaining 25% coming from Section 106 monies.

5. LEGAL AND EQUALITY IMPLICATIONS

- 5.1 We are legally required to declare an AQMA if air quality objective levels are exceeded or are likely to be.

6. CLIMATE CHANGE IMPLICATIONS

- 6.1 Actions undertaken to improve air quality are likely to have a positive impact on climate change.

7. RECOMMENDATION

The Committee is asked to:

- 7.1 Review the information provided in this report and support the approach being undertaken with regards to the ongoing monitoring of air quality.
- 7.2 To note the work undertaken to implement electric vehicle charging points within a number of public car parks and work undertaken as part of the County Council's VPACH project.

Background Papers:

2020 Air Quality Annual Status Report
Local Air Quality Management Technical Guidance TG16
2020 DEFRA ASR Appraisal
2020 Diffusion Tube Location Review and Assessment